

# People Perception Towards Covid-19 Preventive And Management Measures By State Government Of Andhra Pradesh, India: A Study On North Coastal Andhra Pradesh Region

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## **Abstract**

*The main aim of this study is to understand the people perception towards Covid-19 preventive and management measure which has been taken by the Andhra Pradesh State government. Covid-19 Pandemic is a new type of challenge or Non-Programmed activity which was never faced by the Andhra Pradesh State government, India in the past. In this article the researcher studies how the state government has taken preventive and management measure to control the spreading of Covid-19 Pandemic under the leadership of Y.S.R. Jagan Mohan Reddy, Honourable Chief Minister of Andhra Pradesh. 1650 Questionnaire/schedules are distributed among three districts (Visakhapatnam, Vizianagaram and Srikakulam) of North Coastal Andhra Pradesh Region but 1026 questionnaire/schedules are received from the sample respondents. The researcher collected the required data through well structured & tested questionnaires and schedules. The researcher used the Stratified sampling technique which comes under the Probability sampling method and also followed the Covid-19 pandemic guidelines for data collection.*

**Keywords:** Covid-19, Pandemic, Perception, people, Prevention and Management

## **INTRODUCTION:**

In December 2019, the epicentre for the COVID-19 disease is Wuhan city in Hubei Province of China and has become a pandemic as per the World Health Organisation (WHO). The World Health Organization (WHO) has given name to this virus as 2019-nCoV (Novel Coronavirus 2019, 2020) which was later renamed as Severe Acute Respiratory Syndrome Coronavirus 2 (SARS-CoV-2) by the International Committee on Taxonomy of Viruses. The diseases caused by this virus is called as coronavirus disease 2019 and abbreviated as COVID-19 (CO: corona, VI: virus, D: disease and 19: 2019 year). The Carona virus has exact resemblance (87%) with coronavirus of Bat (bird) and so, it is suspected to develop from the bats. This virus is out broken in pneumonia type of disease with respiratory problems and it is leading to death due to respiratory system failure. The patients show flu-like symptoms with breathing problems and high fever. Still, there is no treatment of this disease. However, control, prevention and management measures are the best options.

The disease has spread in 215 countries and territories with about 4,07,14,604 patients and more than 11,23,887 deaths globally. India is the second most affected country with about 75,97,063 patients and more than 1,15,236 deaths after the United States of America (cases: 84,59,041 and deaths: 2, 25,241). On 30<sup>th</sup> January, 2020, the first case in India was confirmed in Kerala's Thrissur district, who was a student and had returned home from Wuhan University of China for a vacation.

## **Prevention and the management**

The prevention and management are very crucial issues to control the COVID-19 Pandemic. Besides, there is a great need for the collective efforts of the people and the government. The regular and the proper care of the homes and hospitals are very important to control this calamity. Therefore, it is urgently advised and requested that all the persons should follow the preventive & management measures, and quarantine strictly otherwise the situation may be the worst.

The constitution of India establishes a federal structure, viz., there are separate governments at union and states levels, and there is a division of powers between the Central and State governments. The “Public health and sanitation; hospitals and dispensaries” subject comes under State list or list II of Indian Constitution. From the above inference, the Public health sector comes under the immediate supervision and control of the state government. Hence, for the Preventive and management measures towards Covid-19 Pandemic in India, the concerned State Governments have been playing an operative role and the Union government of India doing the Coordinating and regulative activities.

This paper studies the perception of people towards the Covid-19 Preventive and Management measures has taken by Andhra Pradesh state government under the leadership of Y.S.R, Jagan Mohan Reddy, Honourable Chief Minister of Andhra Pradesh. The Andhra Pradesh State is one of the 28 states of India and its consists of about 5.4 crores population according to Unique Identification Aadhar organisation of India. The report of Andhra Pradesh State Health Department on 12<sup>th</sup> March, 2020, the first Covid-19 positive case noted in Nellore district to 24 years old man, who returned from Italy and tested Covid-19 positive. Present the virus has spread to all the total 13 districts of the state and East Godavari district has the highest number of cases. On 20<sup>th</sup> October, 2020 the total Covid-19 cases in Andhra Pradesh is 7,83,155 and deaths 6453.

The selected area of study is “North Coastal Andhra Pradesh region” (also called as Uttarandhra Region in Telugu language) and it comprises of three districts viz. Visakhapatnam, Vizianagaram and Srikakulam.

## REVIEW OF RELATED LITERATURE:

The availability of literature on ‘prevention and management of Covid-19 Pandemic’ is hardly available due to new subject and recent origin (Non-Programme activity). The ‘review of related literature’ is presented below.

**Sara Marelli et al., (July, 2020)** found that the impact of lockdown was greater in students than in workers, and also in females than in males. With regard to psycho-emotional aspects, about one-by-third of our sample showed anxious depressive symptoms. The results of this study may provide support for the implementation of some interventions for well-being in pandemic condition.

**Lei Qin et al. (2000)** found that by using Social Media Search Indexes (SMSI) to predict the outbreak of COVID-19 Pandemic among populations in affected areas could be effective, and demonstrated a high correlation with new suspected and, confirmed COVID-19 pandemic infection cases. SMSI is an effective early predictor, that would enable the health government departments to point potential and high-risk outbreak areas. So, the health government departments should prepare in advance for epidemic prevention and plan new public health policies earlier.

**Tia Sheree Gaynor & Meghan E. (September 2020)** concluded in their research-findings that existing disparities exacerbate COVID-19 pandemic outcomes for Black people. Targeted universalism (means setting universal goals and using targeted process to achieve those goals) is proposed as an administrative framework to reach the needs of all people affected by COVID-19 Pandemic disease.

**Judd E. Hollander et al., (April: 2020)**<sup>11</sup> concluded that Disasters and pandemics pose peculiar challenges to health care delivery sector. Though Tele-Health not solve them all, it’s well suited for scenarios in which infrastructure remains intact and clinicians are available to see patients. Payment and regulatory structures, state licensing, credentialing across hospitals, and programme implementation all take time to work through, but health systems that have already invested in telemedicine are well positioned to ensure that patients with Covid-19 pandemic receive the care they required. In this occasion, it may be an effectively perfect solution.

**CDC COVID-19 Response Team (March:2020)** found that the risk of deadly COVID-19 pandemic in USA increases with age. The Team recommend Social distancing for all ages to slow the spread of the virus, protect the health care system, and help protect vulnerable older adults. Further, avoid cruise travel and nonessential air travel, and stay home as much as possible to further reduce the risk of being exposed. The people and communities should cooperate to help slow the spread of COVID-19 and protect older adults.

**Hasan Muhammad Baniamin et al. (2020)**<sup>13</sup> summarised different factors that account for both the control and the spread of COVID-19. The study identified countries according to their relative success in preventing the virus and mitigating its spread. Such initial success may not last due to fresh waves of the disease. The factors identified in this study generate inputs for policymakers and practitioners of different countries to consider when making and evaluating policy. Countries that are not affected yet or still in the initial state of the spread of the disease may learn from the factors identified in this study.

**Imran Ali et al. (2020)** realised that Covid-19 pandemic is spreading rapidly among the persons who are taking it non-seriously and not following the advice of WHO, and commands of the local governments. So, the study requested that all the persons should follow the preventive measures, managements and quarantine strictly otherwise the situation may be worsened. In outline, the collective efforts should require globally to fight against Covid-19 like diseases in future.

**Huijuan Jin et al., (April:2020)** revealed that people who infected with Covid-19 may show neurological symptoms first. Neurologists and Healthcare providers could pay close attention to these symptoms and have a high index of suspicion when evaluating patients in an endemic area. The Early recognition of this disease may help in providing of treatment. And also, the isolation of patient at early stage to prevent clinical worsening and spreading of deadly virus.

**Amerigo Giudice et al., (2020)** concluded that COVID-19 has spread worldwide in a pandemic way and infection control measures are mandatory to limit contagion, especially for healthcare professionals who meet potentially infected patients. In any case, the decrease of infectious risk remains a major challenge for dentists, among the most exposed health professionals.

### Objectives of the Study

- 1 To study the perception, opinion and satisfaction levels of North Coastal Andhra Pradesh Region people towards Covid-19 preventive and management measures has taken by state government of Andhra Pradesh.
- 2 To study, how the State Administrative mechanism is responsive, proactive and effective in Prevention and Management of Covid-19 pandemic.
- 3 To study which Strategies, methods and techniques followed by Andhra Pradesh State government to Control and prevention of spread of Covid-19 Pandemic disease.

### limitations of the study

1. The study was delimited to Geographic area of North Coastal Andhra Pradesh region of Andhra Pradesh only.
2. The study does not cover the total population of North Coastal Andhra Pradesh Region people, due to restraint of time & resources.
3. The majority of the Respondents are those who are affected Covid-19 affected persona and their family members.
4. Due to Covid-19 lockdown limitations rules, the person to person interaction is hardly possible and majority of information gathered through Telephone, WhatsApp calls, etc.

### RESEARCH METHODOLOGY

The researcher has done a descriptive research on the topic “People perception towards Covid-19 Preventive and Management Measures by State Government of Andhra Pradesh, India: A Study on North Coastal Andhra Pradesh Region”. The Stratified sampling technique (population divided into groups based on some characteristics and then within each group, a simple random sample is used) has been used for distribution of Questionnaire and Schedule for primary data collection. To collect information through questionnaire and schedule, the researcher mostly used Telephone and Internet networks like Gmail, skype, WhatsApp’s, Facebook, SMS, etc, due to Covid-19 rules. Secondary data were collected from the available, books, journals, records, and websites. The data has been analysed with the statistical tools like averages and percentage analysis. The study is quantitative and to some extent qualitative in nature. The research period started from 21<sup>st</sup> June, 2020 and ended on 20<sup>th</sup> October, 2020.

### ANALYSIS AND DISCUSSION:

The Researcher has been received response from 1026 (One thousand and twenty-six) sample respondents out of total distributed 1650 Questionnaires & schedules in North Coastal Andhra Pradesh Region. The majority of the Respondents are those affected by Covid-19 Pandemic and their family members. According to 2011 census of India, the total population of this region is 9,338,177. The selected area of study is “North Coastal Andhra Pradesh region consists of 3 districts viz. Visakhapatnam, Vizianagaram and Srikakulam. The distribution is given below table.

**Table 1: Number of Covid-19 cases and Sample Respondents from three Districts of North Coastal Andhra Pradesh Region**

Sl. No.	Name of the Districts	Population (Census-2011)	Total Covid-19 Positive Cases	Total Covid-19 deaths	Sample Respondents	Percentages (%) of Samples
1	Visakhapatnam	2,703,114	51490	455	412	40%
2	Vizianagaram	2,344,474	36415	222	294	29%
3	Srikakulam	4,290,589	40808	327	320	31%
<b>Total: -</b>		<b>9,338,177</b>	<b>91985</b>	<b>1,004</b>	<b>1026</b>	<b>100%</b>

Source: Primary data

Figure: -1

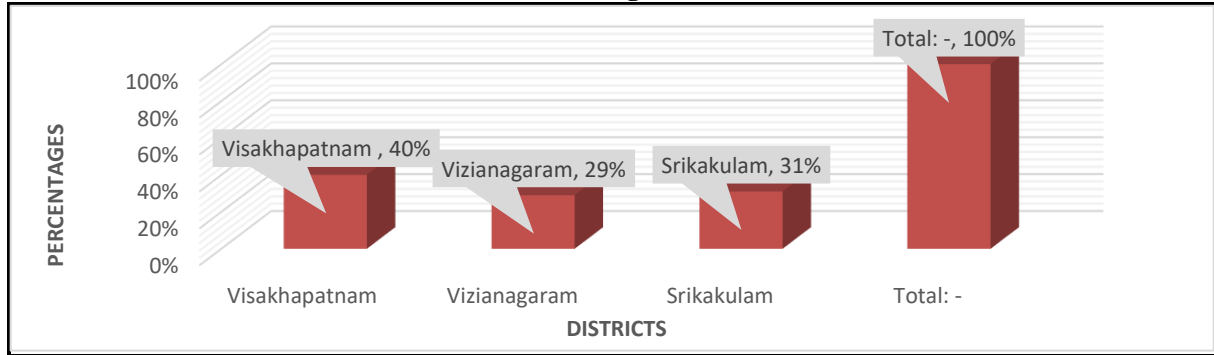


Table 2: The Sample Respondents' Socio-Economic Profile

Sl. No.	Variables	Particulars	No. of Respondents	Percentages (%)
1	Age group	Below 25years	174	17%
		25-55years	493	48%
		55 Above	359	35%
		<b>Total</b>	<b>1008</b>	<b>100%</b>
2	Gender Group	Males	564	55%
		Females	462	45%
		<b>Total</b>	<b>1026</b>	<b>100%</b>
3	Geographical Regions	Rural	595	58%
		Urban	431	42%
		<b>Total</b>	<b>1026</b>	<b>100%</b>
4	Community-wise	OC	211	21%
		BC	512	50%
		SC	199	19%
		ST	81	8%
		Minorities	23	2%
		<b>Total</b>	<b>1026</b>	<b>100%</b>

Source: Primary data

#### Inference

From the above table, the highest respondents age group is 'between 25-55 years' age group (48%) then followed by '55 years above' age group (35%), and 'below 25 Years' age group (17%). In Gender Group variable, the male (55%) is the highest then followed by female (45%). In Geographical region group, the 'rural region' (58%) group is the highest then followed by 'Urban region' (42%). Among 'community groups', the highest is 'BC community' (50%) then followed by 'Open Community (OC)' (21%), 'SC Community' (19%), 'ST Community' (8%) and 'Minority Community' (2%).

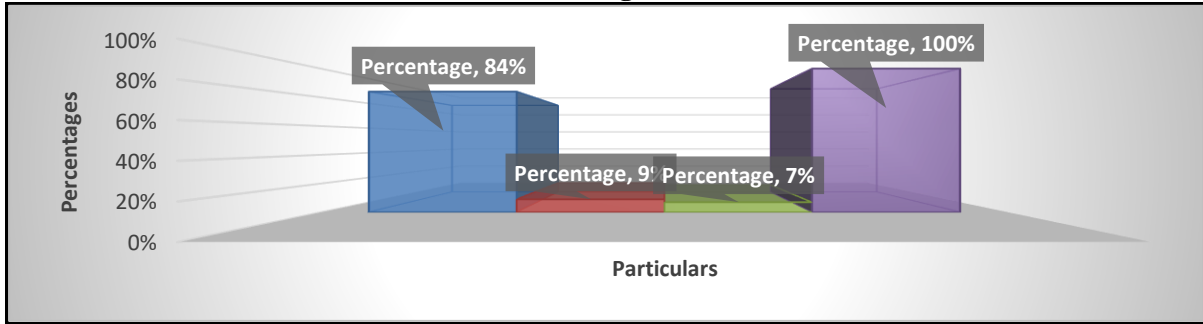
In the Socio-economic Profile clearly evident that the respondents belong to the age group 'between 25 to 55 years' (48%), male (55%), rural region (58%) and BC Community group (50%) are the highest.

Table 3: The Respondents perception towards Andhra Pradesh Government's methods and techniques using for prevention of Covid-19 Pandemic.

Particulars	Number of Respondents	Percentage
Effective	866	84%
Neutral	91	9%
Ineffective	69	7%
<b>Total</b>	<b>1026</b>	<b>100%</b>

Source: Primary data

**Figure: -2**



**Inference**

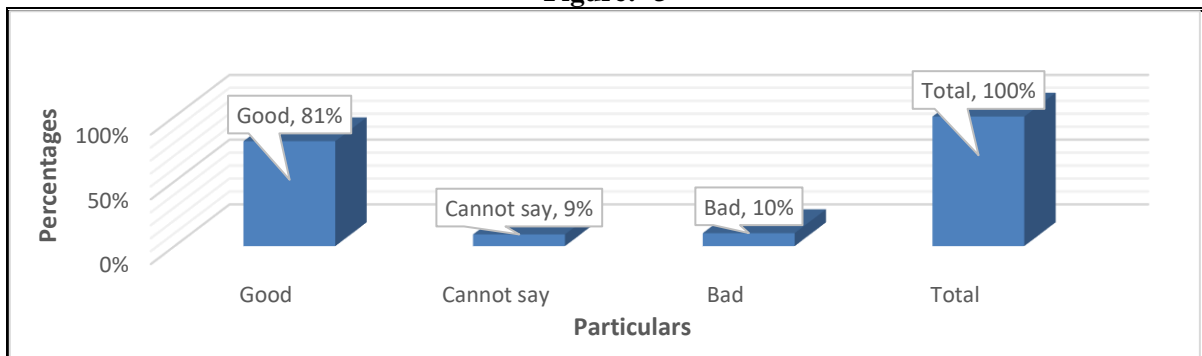
In this table, the ‘Effective’ option (84%) is the highest then followed by ‘Neutral’ option (9%) and ‘Ineffective’ option (7%). Hear, 84% of North Coastal Andhra Pradesh sample respondents perception towards the State government using methods and techniques for prevention of Covid-19 Pandemic are effective. Hence, the North Coastal Andhra Pradesh Region people believed that the State Government used methods and techniques like trace-test-treat method, Containment zones, Social distancing, work from home, etc., to control (mass community spread) Covid-19 Pandemic are “Effective”.

**Table: - 4: Respondents perception towards AP state government’s awareness campaign about Covid-19 Pandemic.**

Particulars	No. of Respondents	Percentage
Good	834	81%
Cannot say	91	9%
Bad	101	10%
<b>Total</b>	<b>1026</b>	<b>100%</b>

Source: Primary data

**Figure: -3**



**Inference**

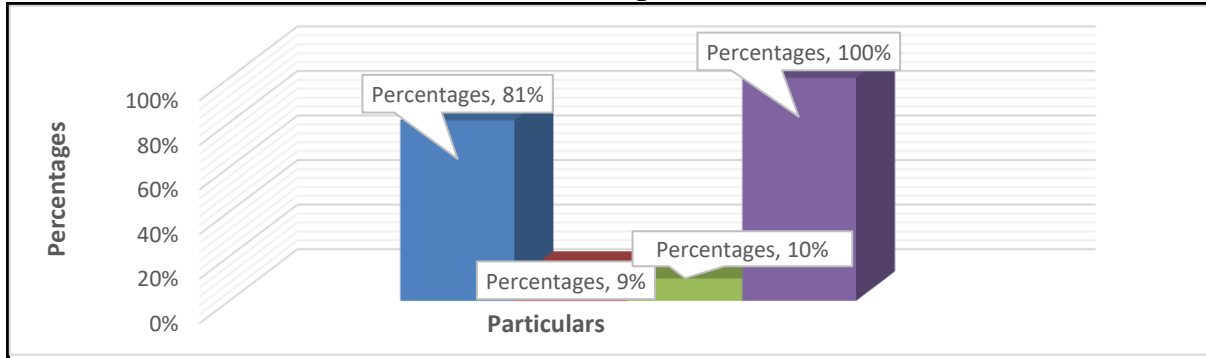
In this table, the ‘Good’ option (81%) is the highest then followed by ‘Bad’ option (10%) and ‘Cannot say’ option (9%). The table, clearly shows that 81% of sample respondents perception towards AP state government’s awareness campaign about the Covid-19 Pandemic is good. Hence, the North Coastal AP people accepted the State government is good in creating awareness about Covid-19 Pandemic dangers and its preventive measures through their Communication networks like media, Government officers, etc.

**Table: -5: Respondents perception towards the State government’s supply of nutritional food and regulation of food prices**

Particulars	No. of Respondents	Percentages
Satisfied	834	81%
Neutral	91	9%
Dissatisfied	101	10%
<b>Total</b>	<b>1026</b>	<b>100%</b>

Source: Primary data

**Figure-4**



**Inference**

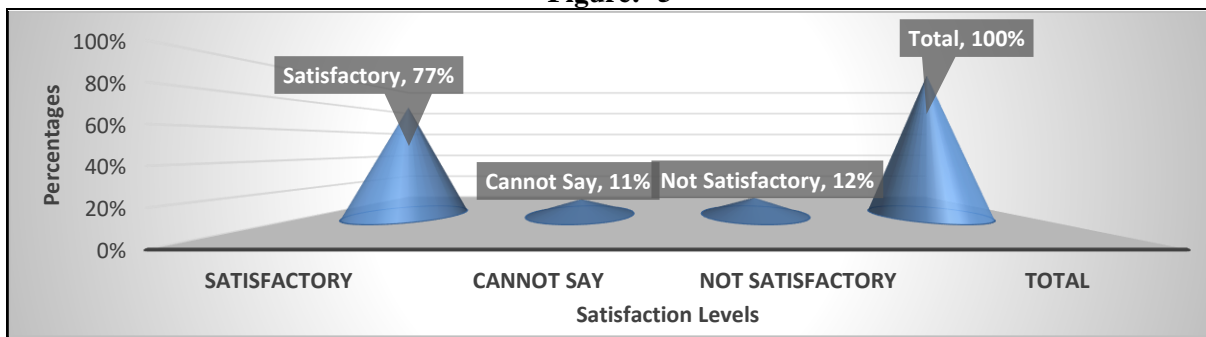
In this table, the ‘satisfied’ option (81%) is the highest then followed by ‘Dis-satisfied’ option (10%) and ‘Neutral’ option (9%). The table, clearly shows that 81% of respondents satisfied towards the State government’s supply of nutritional food and regulation of food prices. So, North Coastal Andhra Pradesh people are satisfied with the AP State Government in time supply of nutritional and essential food items (to boost the immunity system) to people through PDS (Public Distribution System) & AWC (AnganWadi Centres) at free of cost, Rythyu Bazars at cheap prices and other markets at regulating prices to control the Covid-19 Pandemic.

**Table: -6: Respondents perception towards government’s strictly implementation of Containment zones, Red zones and Buffer zones rules.**

Particulars	No. of Respondents	Percentage
Satisfactory	789	77%
Cannot Say	111	11%
Not Satisfactory	126	12%
<b>Total</b>	<b>1026</b>	<b>100%</b>

Source: Primary data

**Figure: -5**



**Inference**

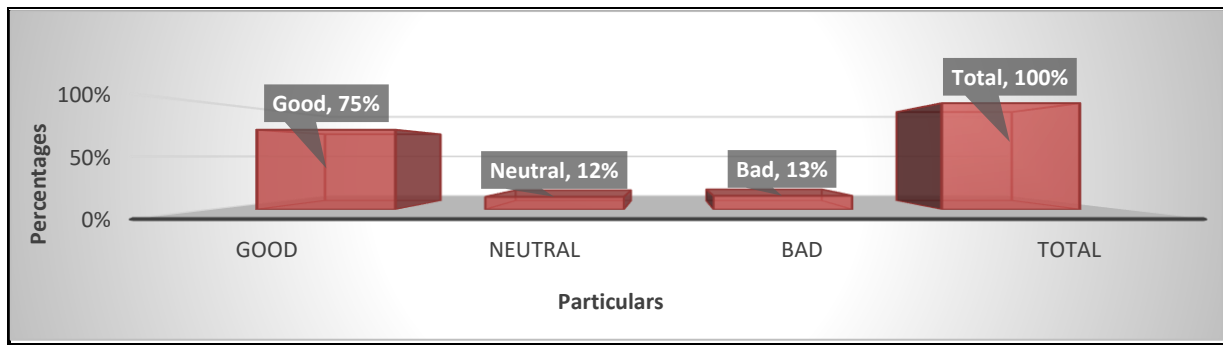
In this table, the ‘Satisfactory’ option (77%) is the highest then followed by ‘Not Satisfactory’ option (12%) and ‘Cannot say’ option (11%). Hear, it clearly indicates that 77% of respondents satisfactory towards State government strictly implementation of Containment zones, Red zones and Buffer zones rules. So, the people of North Coastal Andhra Pradesh are satisfactory towards the state government strict implementation of lockdown rules in Containment zones, Red zones and Buffer zones of rural and Urban areas to restrict the spread of Covid-19.

**Table: -7: Respondents perception towards role of Andhra Pradesh State Police Department in implementation of Lockdown rules to prevention of Covid-19.**

Particulars	No. of Respondents	Percentages
Good	767	75%
Neutral	118	12%
Bad	141	13%
<b>Total</b>	<b>1026</b>	<b>100%</b>

Source: Primary data

**Figures: - 6**



**Inference**

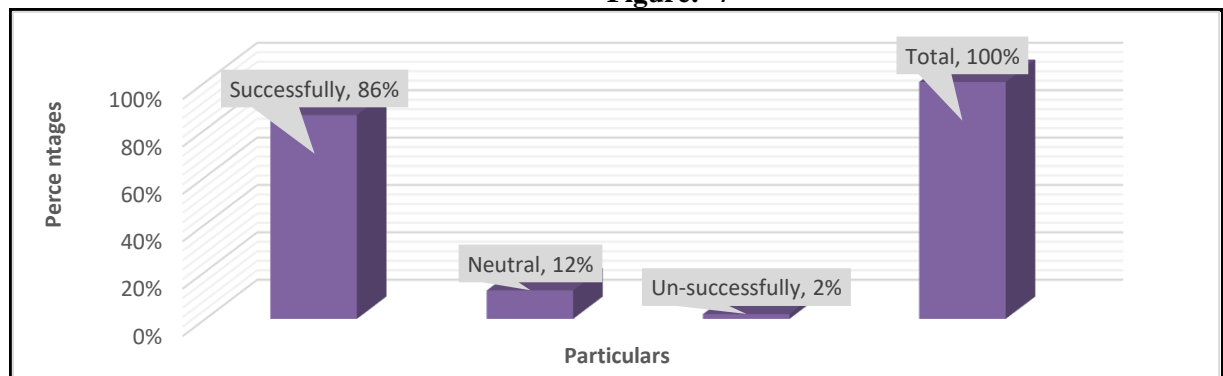
In this table, the ‘Good’ option (75%) is the highest then followed by ‘Bad’ option (13%) and ‘Neutral’ option (12%). Hear, it clearly indicates that majority (75%) of respondents accepted the role of Andhra Pradesh State Police Department in the implementation of Lockdown rules are good. So, the North Coastal Andhra Pradesh people opinioned that the Andhra Pradesh state police department has played a good role in the implementation of Lockdown rules like controlling people mobility in public places, social gatherings, functions, etc., to control the Covid-19.

**Table: -8: Respondents perception on State government implementation of Central Government Lockdown rules strictly**

Particulars	No. of Respondents	Percentage
Successfully	886	86%
Neutral	129	12%
Un-successfully	11	2%
<b>Total</b>	<b>1026</b>	<b>100%</b>

Source: Primary data

**Figure: -7**



**Inference**

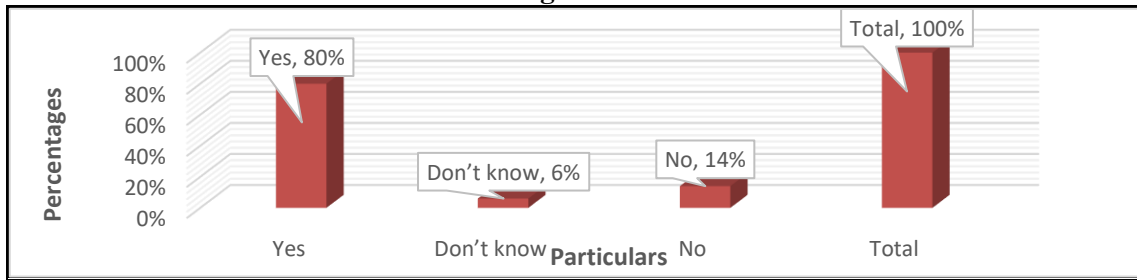
In this table, the ‘Successfully’ option (86%) is the highest then followed by ‘Neutral’ option’ (12%) and ‘Un-successfully’ option (2%). It shows clearly that majority of respondents (86%) agreed that State Government of Andhra Pradesh successfully implemented the Central government Lockdown rules strictly. Hence, The People of North Coastal Andhra Pradesh believed that the State government of Andhra Pradesh successfully implemented the Central government lockdown rules i.e. restriction on public transport (aircraft, train, metro, bus, taxi, etc.), Educational institutions, Gymnasiums, Pilgrimage places, companies, Entertainment places, etc to control the spread of Covid-19 Pandemic disease.

**Table: -9: Respondents opinion towards State government Covid-19 Testing percentage.**

Particulars	No. of Respondents	Percentages
Yes	819	80%
Don’t know	66	6%
No	141	14%
<b>Total</b>	<b>1026</b>	<b>100%</b>

Source: Primary data

**Figure: -8**



**Inference**

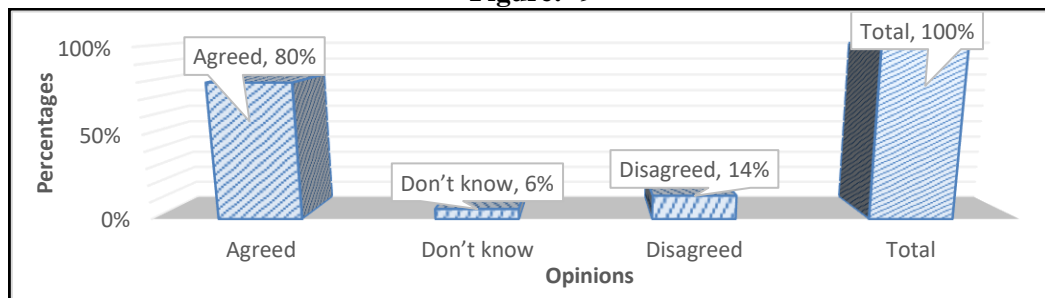
In this table, the ‘Yes’ option (80%) is the highest then followed by ‘No’ option (14%) and ‘Don’t know’ option (6%). It clearly indicates that majority of respondents (80%) accepted “Yes” that the testing capacity of Andhra Pradesh is high and sufficient. Hence, North Coastal AP region people accepted that the Covid-19 Testing (RT-PCR, Trunat and Rapid Kit Testing) capacity of Andhra Pradesh is high and sufficient. Andhra Pradesh State is the highest Testing Capacity in India. And this Testing is conducted according to WHO and ICMR Covid-19 testing guidelines to control the spread of Covid-19 Pandemic.

**Table: -10: Respondents perception towards state government conduct of door-to- door survey and trace-test-treat method.**

Particulars	No. of Respondents	Percentages
Good	829	81%
Don't know	72	7%
Bad	125	12%
<b>Total</b>	<b>1026</b>	<b>100%</b>

Source: Primary data

**Figure: -9**



**Inference**

In this table, the ‘Good’ option (81%) is the highest then followed by ‘Bad’ option (12%) and ‘Don’t know’ option (7%). The above data, clearly reveals that the majority of the respondents (81%) expressed “Good” towards the state government conduct of door-to-door survey and trace-test-trace method. Hence, the North Coastal Andhra Pradesh Region people said that the Andhra Pradesh State government conducted of the door-to-door survey, Rapid Health Check-ups and trace-test method delivery are good to prevention and control of Coviid-19 Pandemic. And this work has done with local network of ASHA workers, Auxiliary nurse midwife (ANM), village, and ward volunteer.

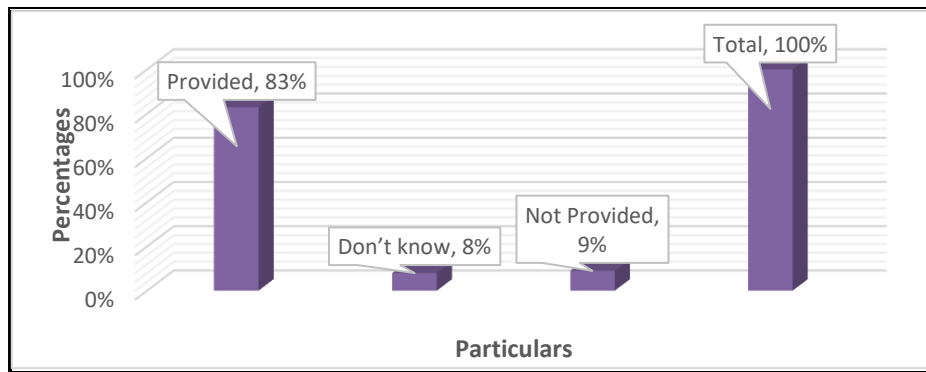
**Table: -11: Respondent perception towards the provision of Surgical Masks, Covid-19 home isolation kits and other medical items by state Government.**

Particulars	No. of Respondents	Percentage
Provided	854	83%
Don't know	81	8%
Not Provided	91	9%
<b>Total</b>	<b>1026</b>	<b>100%</b>

Source: Primary data

**Figure-10**





**Inference**

In this table, the ‘Provided’ option (83%) is the highest then followed by ‘Not provided’ option (9%) and ‘Don’t know’ option (8%). It shows clearly shows that majority of respondent (83%) accepted the State government has provided Surgical Masks and Home isolation Kits at free of Cost. So, The North Coastal Andhra Pradesh people accepted the State government has provided the Surgical masks and Covid-19 home isolation medical and other required medical items at free of cost in rural and urban areas and it is also useful to control and prevention of Covid-19 Pandemic disease.

**Table -12: Respondents perception towards treatment, facilities and monitoring in District and State COVID Hospitals**

Particulars	No. of Respondents	Percentages
Good	833	81%
Don't know	93	9%
Bad	100	10%
<b>Total</b>	<b>1026</b>	<b>100%</b>

Source: Primary data

**Figure-11**



**Inference**

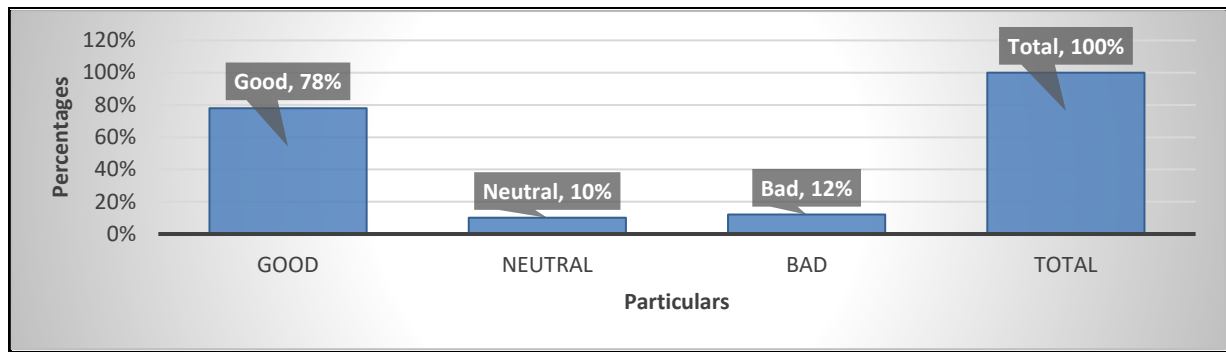
In this table, the ‘Good’ option (81%) is the highest then followed by ‘Bad’ option (10%) and ‘Don’t know’ option (9%). It shows clearly shows that the majority of respondents (81%) agreed the treatment, facilities and monitoring in District and State COVID Hospitals are good. So, the North Coastal Andhra Pradesh region people accepted that the facilities, treatment and monitoring in District and State COVID Hospitals of Andhra Pradesh state government are good to control Covid-19 Pandemic.

**Table: - 13: Respondents view towards amenities and facilities in Quarantine Centres.**

Particulars	No. of Respondents	Percentages
Good	801	78%
Neutral	100	10%
Bad	125	12%
<b>Total</b>	<b>1026</b>	<b>100%</b>

Source: Primary data

**Figure-12**



**Inference**

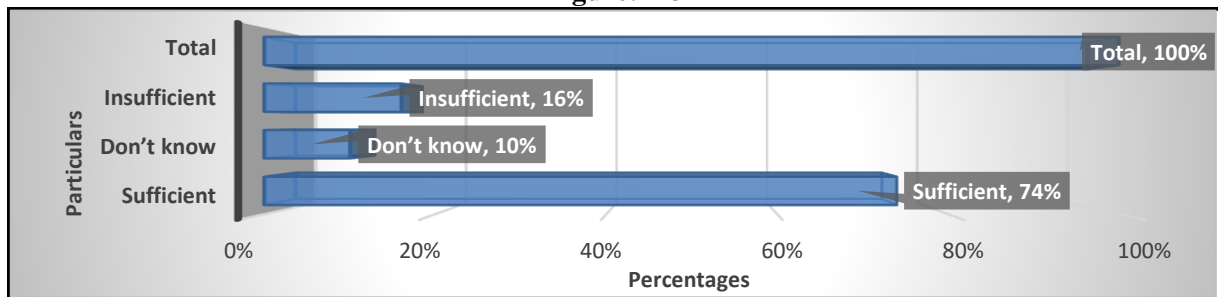
In this table, the ‘Good’ option (78%) is the highest then followed by ‘Bad’ option (12%) and ‘Neutral’ option (10%). It clearly shows that majority of the respondents (78%) said the amenities and facilities in State Quarantine Centres are good. Hence, the North Coastal Andhra Pradesh region people accepted the Andhra Pradesh State government’s Quarantine Centres are good in basic amenities and facilities like Healthy food, drinking water, sanitation material, Hygienic environment, etc. And this State Quarantine are very help in the control of Covid-19 spread by isolation from main stream public.

**Table: - 14: Respondents perception towards improvement of Health infrastructure and Recruitment of Medical Staff.**

Particulars	No. of Respondents	Percentages
Sufficient	758	74%
Don’t know	93	10%
Insufficient	175	16%
<b>Total</b>	<b>1026</b>	<b>100%</b>

Source: Primary data

**Figure: -13**



**Inference**

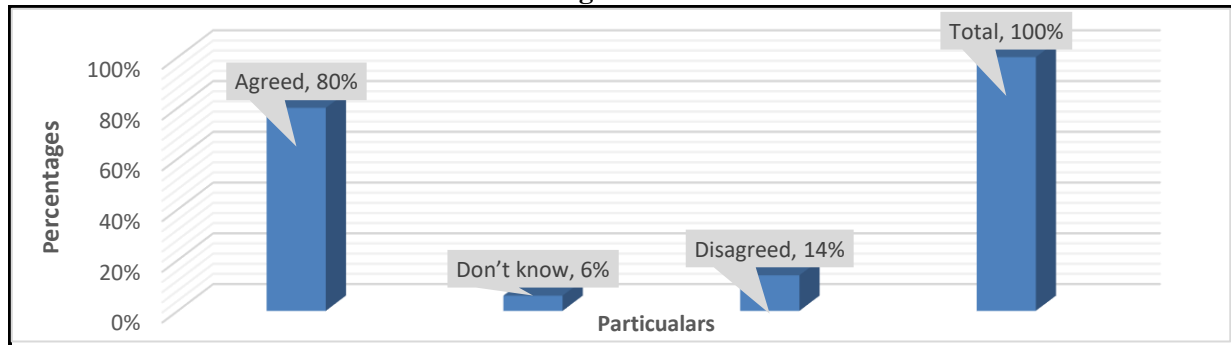
In this table, the ‘Sufficient’ option (74%) is the highest then followed by ‘Insufficient’ option (16%) and ‘Don’t know’ option (10%). It clearly indicates that majority of the respondents (74%) said the Health infrastructure and medical staff are sufficient. Hence, North Coastal Andhra Pradesh region people said that the Health infrastructure (Building, Ventilators and other hospital equipment) and medical staff (Doctors, Nurses, Pharmacists and others) are sufficient to Prevention and Management of Covid-19 Pandemic.

**Table: - 15: Respondent perception towards Frontline workers role in Covid-19 prevention and Management**

Particulars	No. of Respondents	Percentages
Agreed	819	80%
Don’t know	66	6%
Disagreed	141	14%
<b>Total</b>	<b>1026</b>	<b>100%</b>

Source: Primary data

Figure: -14



### Inference

In this table, the 'Agreed' option (80%) is the highest then followed by 'Disagreed' option (14%) and 'Don't know' option (6%). It clearly indicates that the majority respondents (80%) agreed that Frontline staff has played key role in prevention of Covid-19 disease. Hence, North Coastal Andhra Pradesh region people agreed that the State government Covid-19 Frontline warriors (staff) like Medical staff, Police, Sanitation workers, local bodies staff and others have played a key role in the prevention and management of Covid-19.

### Findings

- 1) In the Socio-economic Profile clearly evident that the respondents belong to the age group 'between 25 to 55 years' (48%), male (55%), rural region (58%) and BC Community group (50%) are the highest.
- 2) Hear, 84% of North Coastal Andhra Pradesh sample respondents perception towards the State government using methods and techniques for prevention of Covid-19 Pandemic are effective. Hence, the North Coastal Andhra Pradesh Region people believed that the State Government used methods and techniques like trace-test-treat method, Containment zones, Social distancing, work from home, etc., to control (mass community spread) Covid-19 Pandemic are "Effective".
- 3) The table, clearly shows that 81% of sample respondents perception towards AP state government's awareness campaign about the Covid-19 Pandemic is good. Hence, the North Coastal AP people accepted the State government is good in creating awareness about Covid-19 Pandemic dangers and its preventive measures through their Communication networks like media, Government officers, etc.
- 4) The table, clearly shows that 81% of respondents satisfied towards the State government's supply of nutritional food and regulation of food prices. So, North Coastal Andhra Pradesh people are satisfied with the AP State Government on time supply of nutritional and essential food items (to boost the immunity system) to people through PDS (Public Distribution System) & AWC (AnganWadi Centres) at free of cost, Rythyu Bazars at cheap prices and other markets at regulating prices to control the Covid-19 Pandemic.
- 5) Hear, it clearly indicates that 77% of respondents satisfactory towards State government strictly implementation of Containment zones, Red zones and Buffer zones rules. So, the people of North Coastal Andhra Pradesh are satisfactory towards the strict implementation of lockdown rules in Containment zones, Red zones and Buffer zones of rural and Urban areas to restrict the spread of Covid-19.
- 6) Hear, it clearly indicates that majority (75%) of respondents accepted the role of Andhra Pradesh State Police Department in the implementation of Lockdown rules are good. So, the North Coastal Andhra Pradesh people opinioned that the Andhra Pradesh state police department has played a good role in the implementation of Lockdown rules like controlling people mobility in public places, social gatherings, functions, etc., to control the Covid-19.
- 7) It shows clearly that majority of respondents (86%) agreed the State Government of Andhra Pradesh successfully implemented the Central government Lockdown rules strictly. Hence, The People of North Coastal Andhra Pradesh believed that the State government of Andhra Pradesh successfully implemented the Central government lockdown rules i.e. restriction on public transport (aircraft, train, metro, bus, taxi, etc.), Educational institutions, Gymnasiums, Pilgrimage places, companies, Entertainment places, etc to control the spread of Covid-19 Pandemic disease.
- 8) It clearly indicates that majority of respondent (80%) accepted "Yes" that the testing capacity of Andhra Pradesh is high and sufficient. Hence, North Coastal AP region people accepted that the Covid-19 Testing (RT-PCR, Trunat and Rapid Kit Testing) capacity of Andhra Pradesh is high and sufficient. Andhra Pradesh

State is the highest Testing Capacity in India. And this Testing is conducted according to WHO and ICMR Covid-19 testing guidelines. to control the spread of Covid-19 Pandemic.

- 9) The above data, clearly reveals that the majority of the respondents (81%) expressed “Good” towards the state government conduct of door-to-door survey and trace-test-treat method. Hence, the North Coastal Andhra Pradesh Region people said that the Andhra Pradesh State government conducted of the door-to-door survey, Rapid Health Check-ups and trace-test-treat method and delivery of medicine are good to prevention and control of Covid-19 Pandemic. And this work has done with local network of ASHA workers, Auxiliary nurse midwife (ANM), village, and ward volunteer.
- 10) It clearly shows that majority of respondents (83%) accepted that State government has provided Surgical Masks and Home isolation Kits at free of Cost. So, The North Coastal Andhra Pradesh people accepted the State government has provided the Surgical masks and Covid-19 home isolation medical and other required medical items at free of cost in rural and urban areas and it is also useful to control and prevention of Covid-19 Pandemic disease.
- 11) It shows that the majority of respondents (81%) agreed the treatment, facilities and monitoring in District and State COVID Hospitals are good. So, the North Coastal Andhra Pradesh region people accepted that the facilities, treatment and monitoring in District and State COVID Hospitals of Andhra Pradesh state government are good to control Covid-19 Pandemic.
- 12) It shows that majority of the respondents (78%) said the amenities and facilities in State Quarantine Centres are good. Hence, the North Coastal Andhra Pradesh region people accepted the Andhra Pradesh State government’s Quarantine Centres are good in basic amenities and facilities like Healthy food, drinking water, sanitation material, Hygienic environment, etc. And this State Quarantine are very help in the control of Covid-19 spread by isolation from main stream public.
- 13) It clearly indicates that majority of the respondents (74%) said that Health infrastructure and medical staff are sufficient. Hence, North Coastal Andhra Pradesh region people said that the Health infrastructure (Building, Ventilators and other hospital equipment) and medical staff (Doctors, Nurses, Pharmacists and others) are sufficient to Prevention and Management of Covid-19 Pandemic.
- 14) It indicates that the majority respondents (80%) agreed that Frontline staff has played key role in prevention of Covid-19 disease. Hence, North Coastal Andhra Pradesh region people agreed that the State government Covid-19 Frontline warriors (staff) like Medical staff, Police, Sanitation workers, local bodies staff and others have played a key role in the prevention and management of Covid-19.

### **Recommendations**

- 1) The Andhra Pradesh State government to some extent successful in creating awareness about Covid-19 - dangers and its precautions (like Community spread, Co-morbidity, fatality, Social distancing, Home Isolation, Sanitisation of Hands, wearing masks, etc.) among Urban people. But in rural areas the Covid-19 awareness among the people is inadequate. So, the State government should increase the Covid-19 awareness campaign at mass level in rural and tribal areas through it is communication networks like Print, Electronic and Social media.
- 2) The State Government of Andhra Pradesh should provide Sanitisers, Mask and others items to Below Poverty Level (BPL) people through Public Distribution System (PDS) or Fair price shops at free of cost or affordable prices.
- 3) The Frontline staff for Covid-19 prevention are Medical staff (Doctors, Nurses, Pharmacists, etc.), Sanitation workers and Police. To protect Frontline staff from the deadly Virus then the State government should provide PPE kits, Sanitisers, Masks, Medicines, Vaccines (if discovered) adequately and regular. If possible, the government should supply Nutritious food at free of cost to them to boost their immunity system.
- 4) The State government should provide Covid-19 special allowances (incentives) to Medical staff to increase their motivation levels to work more efficiently for preventive and management measures of Covid-19 Pandemic.
- 5) To increase the effective measures for Covid-19 preventive and management the Health and Medical staff should be trained with latest updated medical technology.
- 6) The State government should strengthen the Isolation and Quarantine centres with well-equipped facilities at every village to face second wave of Carona or any new type of flu/virus disease in future.

- 7) The Government has given permission to the Private Hospitals for Covid-19 disease treatment but the Private Hospitals are charging high amount of fees from the people. So, the government should regulate the fee charges of the Private Hospitals immediately.
- 8) The Covid-19 Testing capacity of Andhra Pradesh State is number one in India. But the state government should increase the Testing labs and reduce the time of testing reports to give quick treatment and isolation of Covid Patients.
- 9) The state government should provide some essential food commodities like fruits, vegetables, milk, groceries through Public Distribution System (PDS)/ Fair Price Shops to the BPL families to boost their immunity system to containment of Covid.
- 10) The State government should strictly implement the order of prohibiting the use and spitting of smokeless tobacco or chewable tobacco/non-tobacco product, sputum in public places.
- 11) The Andhra Pradesh Government has to take people cooperation by involving the people in the Control of Covid-19 disease spreading.
- 12) The State government should use the advanced Information and Technology like ‘COVID alert tracking system’, Setu app, etc., to under control of Covid.

### Conclusion

From this study, it is very clear that the State Government of Andhra Pradesh has taken good preventive and management measures to control Covid-19 in North Coastal Andhra Pradesh Region. Andhra Pradesh is the first highest Covid-19 testing capacity in India. From the begging of the study the Covid-19 cases are very high and end of the research period the cases are declined. If the Covid-19 Vaccine discovered in the year ending then the Union government of India should provide that vaccine first to Frontline staff, Co-morbidities and old patients immediately. If the same Covid-19 preventive and management measures are continued or even improved further will create a good name and fame to the Government of Andhra Pradesh.

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