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# Aid provided by the Government and Union Carbide Company for gas tragedy affected people in Bhopal.

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**Abstract :** During 2014 Indian Government agreed to revise the figures and promised survivors who have never received compensation that, they would get what they were entitled to. One another reason behind compensation claims dragging on decades after leak is due to incorrect figures. The figures of dead and injured are disputed. Activists and Government agree the initial settlement was based on incorrect data. According to the report from Union Carbide they have provided immediate relief to victims and attempted to set up a process to resolve their needs. Union Carbide continued to provide interim relief funds and work with victims providing them economic support, legal action, medical support and other benefits. Government has constructed an alternative work plan to the people who got affected by gas that is work shed program.

Numerous actions have been performed to support these victims. Demonstrations, sit-ins, hunger strikes, marches combined with pamphlets, books and articles. Often these include marches around old Bhopal ending with burning effigies of Government officials, politicians or Union Carbide officers

**Key-words :** Indian Government / Union Carbide / Bhopal Gas Tragedy / Medical Support / Disaster Management

## Introduction

Disaster happened in 1984, thousands of people died after inhaling the toxic gas leaked from the pesticide plant of the Union Carbide India Limited in the state capital Bhopal on the night of December 2 and 3, 1984 creating the world's largest gas disaster. Many of the second and third generation children of the affected people were born with congenital defects. Even after 34 years providing aid is still persisting<sup>1</sup>. In 2018 Madhya Pradesh Government announced they will provide assistance to the victims of the 1984 "The Cabinet has decided that the Government would provide financial assistance to the victims of Bhopal gas tragedy as well as their children for the transplant of liver and kidney in any hospital within or outside the state".<sup>2</sup>

## Why Bhopal survivors had to fight for aid even after 34 years

"About 93% of victims were left out of compensation" said Satinath Sarangi from Bhopal Group for Information and Action, one of five activist groups leading the protest.<sup>3</sup>The cases which launched against company to pay the compensation to survivors and to clean environment pollution went on without success. At present the successor company just as it overtakes the assets of a company, namely Union Carbide it also should overtake the liabilities. UCC's then CEO Warren Anderson passed away on 29 September 2014 having never stood trial for criminal charges.<sup>4</sup>

## Support from Union Carbide Factory after the tragedy

- 1 They have provided approximately \$2 million in aid to the Prime Ministers Relief Fund.
- 2 They kept on providing medical equipment's for the needy.
- 3 They sent team of medical experts with emergency medicines and other assistance.
- 4 They have shared maximum information about Methyl Isocyanate with the Government of India, including all published and unpublished details about the toxicity.
- 5 Team of MIC experts has appointed by company to study and research about the toxicity.
- 6 Arizona State University with the support of company established a vocational technical center at Bhopal.
- 7 Companies offered fund to open a hospital at Bhopal later that offer was declined.
- 8 Company provided funds to Indian Red Cross.<sup>5</sup>

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<sup>1</sup> Alan Taylor, Bhopal: The World's Worst Industrial Disaster, 30 Years Later, The Atlantic, Dec 2, 2014.

<sup>2</sup> Bhopal gas tragedy victims get aid for the transplant of liver and kidney in any hospital, The Indian Express, March 21, 2018.

<sup>3</sup> bbc.com news, Why are Bhopal survivors still fighting for compensation?, December 2, 2014.

<sup>4</sup> Douglas Martin, Warren Anderson, 92, Dies; Faced India Plant Disaster, The New York times, Oct. 30, 2014.

<sup>5</sup> <http://www.Bhopal.com/UCC-Response-Efforts-to-Tragedy>.

## Settlement

Indian Parliament passed a law enabling Government of India to bring all claims on behalf of its citizens. In February 1989 after 24 days of hearings, the Supreme Court of India directed a final settlement of all Bhopal litigation in the amount of \$470 million.<sup>6</sup>The Government of India, Union Carbide Corporation and Union Carbide Limited accepted the courts direction and 10 days after the discussion Union Carbide Company paid \$425 million and UCIL paid \$45 million to the Indian Government.<sup>7</sup>

### Bhopal compensation Claims

- 1) A half million people exposed to the gas and within first three days more than 8000 passed away.<sup>8</sup> Around 40 tonnes of Methyl Isocyanate gas leaked from Union Carbide Pesticide Plant and exposed that large area.
- 2) UCC and UCIL agree to pay \$470m to settle the initial fight for compensation in India's Supreme Court in 1989. As the survivor's legal representative, the Government had asked for \$3.3bn.<sup>9</sup>
- 3) Victims appeal, the Supreme Court upholds the settlement in 1991 and further orders UCC and UCIL to fund a hospital for victims costing \$17m.<sup>10</sup>
- 4) Bhopal welfare commission which distributed compensation says all initial claims had been paid –counting 5295 death and some 527000 in jury claims.<sup>11</sup>
- 5) In June 2010, the Government reviews the compensation after an outcry over UCIL's former executives receiving two-year prison sentences and minor fines for their role in the disaster.<sup>12</sup>
- 6) During December 2010 Attorney General of India files a petition in the Supreme Court to increase the settlement to \$1.1bn arguing it was based on incorrect figures and didn't include costs to clean environmental pollution. It outs the correct casualty figures at 5,295 dead, 4,902 cases of permanent disability and 42 of severe injury.<sup>13</sup>

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<sup>6</sup> Sunita Narain, Chandra Bhushan ,30 years of Bhopal gas tragedy: a continuing disaster - Down To Earth , 08 July 2015.

<sup>7</sup> Ibid .

<sup>8</sup> <sup>8</sup> Bhopal gas tragedy after 30 years, Center for Science & Environment, India, 1 Jan 2014.

<sup>9</sup> Alys Francis , Why are Bhopal survivors still fighting for compensation? - BBC News , Delhi, Dec 2, 2014.

<sup>10</sup> Suroopa Mukherjee, Raghu Rai, Bhopal Gas Tragedy, The worst industrial disaster in human history, A book for young people, Tulika Publishers, New Delhi, 2002, p 56.

<sup>11</sup> Bhopal gas tragedy after 30 years, Published by Center for Science & Environment, India, 1 Jan 2014.

<sup>12</sup> Alys Francis , Why are Bhopal survivors still fighting for compensation? - BBC News Delhi, Dec 2, 2014.

<sup>13</sup> Alys Francis , Why are Bhopal survivors still fighting for compensation? - BBC News Delhi, Dec 2, 2014.

## Down Paying the Damages

Payment of victims and proceedings to that still continues. During 2010 the Government of India sanctioned an amount of 30 crore to provide a monthly pension to 5000 women who are gas victims. This was a partial relief to the people who rejected without any Government economic help. But this 5000 in number is very less comparing to the 16,000 deaths which happened after the tragedy as per Madhya Pradesh action plan records.<sup>14</sup>

According to the research by Indian Council of Medical Research till 1993 continues deaths were marked in victim population. This is not counting the 3,500 excess abortions between 1984 and 1989 that the ICMR has estimated occurred as a result of the disaster<sup>15</sup>. According to the findings of the State Government –run center for rehabilitation studies [that monitored exposure – related mortalities and morbidities after all ICMR research was terminated in 1994] at least one death attributable to exposure occurred every day in the year 2000 .Estimates of disaster –related deaths, based on these scientific findings, are close to 25,000 which is nearly five times the figure being currently presented in the curative petition.<sup>16</sup>

## Discrepancies in the written figures

Death reports are still in conflict; Madhya Pradesh State Government presented a figure of 15,342 disaster related deaths in a curative petition before Supreme Court based on the claims registered till 1997. Official figures of the extent of injuries caused by the disaster are sharply different from those presented in the curative petition.<sup>17</sup> While records from the hospitals run by the department of Bhopal gas tragedy relief and rehabilitation show that there were 5,02,686 persons with chronic illness 34 years after the disaster . Around 88 % of the total population acknowledged to be injured. Seven percent of persons acknowledged to have suffered exposure induces injuries have been categorized as having suffered permanent injury. <sup>18</sup>

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<sup>14</sup> Rachna Dhingra , Memorandum on plan of actions for the relief and rehabilitation of Bhopal gas tragedy victims. documentary, Bhopal group for information and action , New Delhi ,2009 , p 16.

<sup>15</sup> N.D Jayaprakash, The Path to Sustainable Development: Lessons from the Bhopal Disaster, News click, 11 Dec 2014.

<sup>16</sup> Bhopal gas tragedy relief and rehabilitation; a report Bhopal ; 2002 .

<sup>17</sup> Satinath Sarangi, Compensation to Bhopal gas victims: will justice ever be done?\_The Indian Journal of Medical Ethics, 10, 2012.

<sup>18</sup> Curative petition (civil) No 345-347/2010 filed by Union of India In The Supreme Court of India ,2010.

## Wrongful Denial of Compensation

The injustice in Government's medical categorization is evident as in the area of Jayaprakash Nagar where a house to house survey carried out by the Sambavana trust, a local NGO, 91% of the residents were categorized as temporarily injured and paid the minimum compensation of Rs 25,000.<sup>19</sup> But according to the Government records they are still confused about the figure of gas affected people. Jayaprakash Nagar is a community located right opposite the carbide factory that bore the full brunt of the disaster, with entire families being wiped out in a community where today at least one member in each family is unable to work or do any activities due to the exposure related to chronic illness. Gas has completely shattered their lives. Survivors and supporters of the NGO organizations in Bhopal who are intervening in the matter of the curative petition pending before the Supreme Court have presented estimated of deaths and injuries related to the disaster based on findings of scientific research . According to the survivors petition the Government of India should be claiming at least \$8.1 billion which is about seven times the amount it is currently claiming.<sup>20</sup>

Activists in Bhopal have raised complaints against the US Corporation asking them to pay 1.2 billion US Dollars as additional compensation for Bhopal Gas disaster victims. The case is under Bhopal's Gautam Nagar police station. Recently CBI has forwarded 30 complaints by an NGO working for survivors to the MP police.<sup>21</sup>The organizations are seeking decisive action to prevent Union Carbide Corporation (UCC) from escaping liability of crimes related to the disaster of 1984. The recent letter sent to CBI gains importance as Dow-DuPont Inc the American company formed after the merger of Dow Chemical and DuPont on August 31 2017 .UCC became a subsidiary of the Dow Chemical Company (tdcc) in 2001 and TDCC refuses to assume UCC's liabilities. UCC India was owner of pesticide plant in Bhopal where gas leaks in 1984 lead the world's worst industrial disaster. Dow acquired Union Carbide Corp in 2001 more than 16 years after the tragedy and 10 years after the \$470 million settlement paid by UCC and Union Carbide India and approved by the Indian Supreme Court.<sup>22</sup>

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<sup>19</sup> Satinath Sarangi, Compensation to Bhopal gas victims: will justice ever be done? *The Indian Journal of Medical Ethics*, 2012, p 2.

<sup>20</sup> The government's petition was originally filed in 2010 on the basis that the SC's 1989 judgment assessed the quantum of compensation on lower figures of deaths and injuries. The government also mentioned that the judgment did not take the environmental impact into account, News Click India ,28 Jan 2019.

<sup>21</sup> Soma Basu ,Bhopal gas disaster: Dow Chemical fails to comply with court summons Activists blame Ministry of Home affairs for not taking the matter seriously ,Down to Earth,04 July 2015.

<sup>22</sup> Soma Basu ,Bhopal gas disaster: Dow Chemical fails to comply with court summons Activists blame Ministry of Home affairs for not taking the matter seriously ,Down to Earth,04 July 2015.

## Categorization and Settlement of Individual Claims

The claims act brought into existence the scheme under which claims of compensation by the Bhopal gas victims had to be registered and processed. The actual process of registration of claims took place in two phases. In the first phase between 1985-89 about 6.4 lakh persons filed claims.<sup>23</sup>

A three member committee comprising advocates practicing in the Supreme Court visited Bhopal conducted sittings and gave the following findings.

- 1) The Government was acting as an adversarial role in the matter of payment of compensation.
- 2) The change of the categorization was being done without any proper medical evaluation, the conversion of death cases to injury cases was improper.
- 3) The suo moto powers of revision were being exercised arbitrarily and once a matter is taken by way of appeal or revision all payment of compensation stopped.
- 4) Cases had taken out of turn and there was a lot of discontent in this regard.
- 5) The procedure in Lokadalats was highly unsatisfactory with token signatures being taken from claimants on consent forms.
- 6) Claims of children were not being dealt with individually even if they had become orphans.

In response to the report of the committee an affidavit dated January 3, 1996 was filed by the registrar, the office of the welfare commissioner, stating inter alia that a broad consensus had been arrived at the meeting of the Deputy Commissioners in the Welfare Commissioner on December 16, 1993 with respect to the assessment of compensation. The affidavit stated that “The purpose of this consensus is that for the assessment of compensation normally the following basis be adopted”<sup>24</sup>

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<sup>23</sup> The Bhopal Gas Leak Disaster (Processing Of Claims) Act, 1985 , ACT NO. 21 OF 1985 [ 29 th March, 1985.]

<sup>24</sup> The Bhopal Gas Leak Disaster (Processing Of Claims) Act, 1985 , ACT NO. 21 OF 1985 [ 29th March, 1985.]

## Victimization of the Bhopal gas victims can summaries in these factors

- The lack of awareness of the legal process and the absence of legal aid led many of the persons to claim compensation of amounts less than a lakh rupees and over 90% of them received only Rs.25,000/- therefore , the high degree of dissatisfaction with the compensation awarded.<sup>25</sup>
- Nothing of the compensation money was saved since most of it was utilized in health care and repayment of loans. Lack of awareness again resulted in a very small percentage actually filing appeals against awards.
- The results of the appeal were hardly beneficial to the claimant. A sizeable number of the appellants (26.5) faced the ironic result of the compensation awarded to them in the first court reduced by the appellate court. The appeal process was also clearly unsatisfactory.<sup>26</sup>
- No claim was settled earlier than a waiting period of 7 years. The adjudicatory process involved over 5 visits of two hours each for the claimant.
- Many of the victims had to pay a lot money to court to get a final settlement.

## Government sponsored programmes to create employment for the women

Most of the gas victims are from the backward community and lower strata Government came down to help them economically and to rehabilitate the victims. To expedite the matters Madhya Pradesh Government has made a post of Commissioner for Economic Rehabilitation.

With the support of Government an Industrial Training Institute has begun with massive self-sufficient modern buildings to train unemployed gas victims, so they could be economically independent.<sup>27</sup>The industrial training institute has been transferred the administrative control to manpower planning & training department under Government of Madhya Pradesh. Almost 9,618 gas victims' children were given training in this Industrial Training Institute. Per year almost around 300 admissions are given. Since the last two years Government itself help them to find employment after they pass out from their institute.<sup>28</sup>

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<sup>25</sup> Satish Modh ,Introduction to Disaster Management , Macmillan publishers India 2010 ,p 304.

<sup>26</sup> Ibid.

<sup>27</sup> Jamie Cassel, The Uncertain promise of law: lessons forms Bhopal, Union Carbide Plant disaster, Osgoode Hall Law Journal, University of Toronto Press in 1993, p 36.

<sup>28</sup> Ravi Kiran and Shamanth Jilla, Citizens' Issues, Public Interest , 7 ways the government played a role in the Bhopal disaster ,03 December 2014.

## Work Sheds

Government has constructed an alternative work plan to the people who got affected by gas that is work shed program. In the different gas exposed localities Government has opened 42 work sheds and handed over to various Non – Governmental Organizations who in turn provide employment to gas victims by running various training cum production centers. The industrial sheds have been allotted to private entrepreneurs and Government undertakings to run large industrial units with a view to provide employment to larger number of gas victims. An amount of Rs 4.00 cores has been sanctioned by the Government for a Special Economic Rehabilitation Programme pertains to training related to traditional Art work like Zari , Zardoji ,Paper Pulp Work etc are being provided to Gas Victims through Commissioners , Economic Rehabilitation . An amount of Rs 1.00 crore has been handed over to commissioner of M.P Hasth Shilp Vikas Nigam.<sup>29</sup>

Under this programme in first phase Madhya Pradesh Hasth Shilp Vikan Snigham has identifies four NGOs for imparting training in its first phase. The organizations are as follows,

- 1 Manav Vikas Seva Sangh Bhopal.
- 2 Seva Bharathi Madhya Bhart Bhopal.
- 3 Rajiv Smirti Gas Peedith Punarwas Kendra , Bhoapl.
- 4 Gynaoday Educational Society Bhopal.

After completion basic training a skill development training program was initiated through these above mentioned organisations for a period of six months. Each center was responsible for providing training to 20 gas beneficiaries. But comparing to the victims the support from Government is very less. After launching those programs Government came up with a Hasta Shilp Vikas Niagam with identified 10 Non-Governmental Organisations for providing training in cottage welfare projects , tailoring , handicrafts , hand art , needle work and textile design . After selections of candidates they gave intense training to the participants. Also provided support schemes to start their ventures. The tailoring program has already been completed in 2008. Now Madhya Pradesh women’s financial development corporation has been providing training related to paper napkin and sanitary napkin production to 600 gas victims.<sup>30</sup>

The department has also provided Rs27.00 lakhs to Center for Entrepreneurship Development Madhya Pradesh, Bhopal for imparting job oriented training programme related to various trades. Altogether 419 persons are trained till now during this year, the following Non-Government Organizations are associated with Economic Rehabilitation Programmes .<sup>31</sup>

<sup>29</sup>Malini Nair, Bhopal Gas Tragedy – A Social, Economic, Legal and Environmental Analysis, Department of Rangeland Ecology and Management, Texas, 10 December 2005.

<sup>30</sup> Bhopal Gas Tragedy Relief and Rehabilitation, Govt. Of Madhya Pradesh Health Website.

<sup>31</sup> Malini Nair, Bhopal Gas Tragedy – A Social, Economic, Legal and Environmental Analysis, Department of Rangeland Ecology and Management, Texas, 10 December 2005.

## NGO working Bhopal with the support of Government

1. Manav Vikas Seva Sangh
2. Seva Samithi
3. Swabhiman Mahila Udhog
4. Rajeev Smirithi Gas Peedit Punarvas Kendra
5. Mahila Vikas Manch
6. Maha Shaki Seva Kendra
7. Dukh Nirvana Samithi
8. Gas Peedit Mahila Samiti
9. Oriental Kala Avum Seva Kendra
10. Berozagar Gas Peedit Mahila Samithi

Major training had been provided by training and design center Indore.<sup>32</sup>

### Conclusion

Organisations representing people says they never got enough support from Government when it was needed for them. Even after 34 years they still haven't given a proper relief and rehabilitation, proper health and employment as promised, social benefits and security. A study which was needed before the plan implementation never happened. Government has promised smart card to the victims to access their nearby Bhopal memorial hospital or any of the six gas relief hospitals which run by state Government. But not a single survivor has been issued the smart card till date. Another promise of Rs 1000 as widow pension is yet to resume forcing thousands of elderly women to live in abject poverty, NGO workers who worked for this pension says Government had promised to continue to give support to gas victims'.<sup>33</sup>

Victims are still behind the court for enforcement of civil liability through a complex maze of petitions and proceedings in courts. There can be little doubt that the victim of the Bhopal gas disaster has been denied justice through this elaborate litigation. As pointed out by Usha Ramanathan in her work on compensation for personal injury. The quasi bureaucratic determination and disbursal of compensation, which saw the setting up of a hierarchy of claims commissioners, also effected the serving of victims recognition from mainstream judicial process , except for the largely public interest interventions when matters were taken to the Supreme Court.<sup>34</sup>

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<sup>32</sup> Economic Rehabilitation, Bhopal Gas Tragedy Relief and Rehabilitation, Govt. Of Madhya Pradesh Health Website.

<sup>33</sup> Vivek Trivedi, Bhopal Gas Tragedy Victims Allege Betrayal From MP Govt, to Seek President's Intervention, News18 ,8, 2017.

<sup>34</sup> S. Muralidhar ,Unsettling Truths, Untold Tales The Bhopal Gas Disaster Victims 'Twenty Years' Of Courtroom Struggles For Justice [Bhopal Gas Leak Disaster – Legal Issues] 2004.

At every stage the victims had to go back to the Supreme Court for basic survival needs. Even though they have given multiple cases nothing has worked or it helped them in their life. It is indeed unfortunate that there has been no effective access to justice for the Bhopal gas victims. The continuing lack of legal awareness as well as the complete absence of any form of legal aid appears to be wholly unjustified and inexplicable, considering the magnitude of the disaster. There has been a collective failure on the part of the executive, the judiciary and the lawyers to set right this inexcusable wrong. Future Bhopal's may, given the present state of affairs, meet with the same response. The law as it stands devalues human life, suffering and the legal system, as presently ordered, appears incapable of rendering justice to the victim of a mass disaster

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## Statistical Analysis on Aid provided by the Government and Union Carbide Company for gas tragedy affected people in Bhopal.

### Variable – I

a. (child, partner or any other family member) mention their special health conditions

- |   |   |
|---|---|
| I) Bronchial asthma <input type="checkbox"/>    | II) Recurrent chest infections <input type="checkbox"/> |
| III) Birth defects <input type="checkbox"/>     | IV) Psychological problems <input type="checkbox"/>     |
| V) Ophthalmic problems <input type="checkbox"/> | VI) Reproductive toxicity <input type="checkbox"/>      |
| VII) Other <input type="checkbox"/>             | VIII) Not Applicable <input type="checkbox"/>           |

b. Getting any Government medical support

- I) Yes     II) No

Correspondence Table

Special health conditions	Getting government medical support		
	Yes	No	Active Margin
Bronchial asthma	59	131	190
Recurrent chest infections	11	23	34
Birth defects	9	32	41
Psychological problems	0	7	7
Ophthalmic problems	14	33	47
Reproductive toxicity	14	13	27
Other	0	0	0
Not Applicable	56	98	154
Active Margin	163	337	500

Table 1: 1

The Correspondence Table displays the frequency for each category of each variable; it is essentially a cross-tabulation frequency table. The nominal variable is special health conditions and other variable is getting Government medical support. The values given are called scores, frequencies. The relationship between two variables cannot explain in the graph. Graph cannot be drawn because there is only one valid dimension. The requested number of dimension is greater than the maximum number of dimension. It's adjusted to 1. Correspondence analysis study the relationship with non-parametric variables.

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	11.426 <sup>a</sup>	6	.076
Likelihood Ratio	13.398	6	.037
Linear-by-Linear Association	2.098	1	.147
McNemar-Bowker Test	.	.	<sup>b</sup>
N of Valid Cases	500		

a. 2 cells (14.3%) have expected count less than 5. The minimum expected count is 2.28.

b. Computed only for a P x P table, where P must be greater than 1.

Table 1: 2

Chi-square test is used to find if there is any kind of relationship between the categorical variables. The two variables which have given here consist of more than two categorical variables. The value of test statistic is 11.426. The variables such as Special health conditions and Getting Government medical support are dependent, they are related each other. Sig. value is less  $< 0.05$ . Since the p-value is less than our chosen significance level  $< 0.05$  we can reject this hypothesis and finalize that there is relation between Special health conditions and Getting Government medical support. Both have a significant association.

**Variable – II**

a. Capable for meeting health expenditure

I) Yes  II) No

b. Any health care insurance available under Government plan

I) Yes  II) No  III) Not Aware

**Correspondence Table**

Capable of meeting health expenditure	Health care insurance available under government plan			
	Yes	No	Not Aware	Active Margin
Yes	1	0	0	1
No	293	110	96	499
Active Margin	294	110	96	500

Table 2: 1

The Correspondence Table displays the frequency for each category of each variable; it is essentially a cross-tabulation frequency table.

The nominal variable is able to meet your health expenditure and other variable is Any health care insurance available under Government plan. The values given are called scores, frequencies. The relationship between two variables cannot explain in the graph. Graph cannot be drawn because there is only one valid dimension. The requested number of dimension is greater than the maximum number of dimension. It's adjusted to 1.

Correspondence analysis studies the relationship with non-parametric variables.

**Chi-Square Tests**

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	.702 <sup>a</sup>	2	.704
Likelihood Ratio	1.063	2	.588
Linear-by-Linear Association	.585	1	.444
McNemar-Bowker Test	.	.	<sup>b</sup>
N of Valid Cases	500		

a. 3 cells (50.0%) have expected count less than 5. The minimum expected count is .19.

b. Computed only for a P x P table, where P must be greater than 1.

Table 2: 2

Chi-square test is used to find if there is any kind of relationship between the categorical variables. The two variables which have given here consist of more than two categorical variables. The value of test statistic is .702. The variables such as Capable of meeting health expenditure and Health care insurance available under Government plan are

independent, they are not related each other. Sig. value is greater  $>0.05$ . Since the p – value is greater than our chosen significance level  $> 0.05$  we can accept this hypothesis and finalize that there is relation between Capable of meeting health expenditure and Health care insurance available under Government plan. Both have a significant association.

### Variable – III

a. Any compulsory annual women's health check-up for tragedy victims

I) Yes  II) No

b. Any women health improvement plans from the Government side

I) Yes  II) No

**Correspondence Table**

Compulsory annual women's health check-up for tragedy victims	Women health improvement plans from the government		
	Yes	No	Active Margin
Yes	189	184	373
No	65	62	127
Active Margin	254	246	500

Table 3: 1

The Correspondence Table displays the frequency for each category of each variable; it is essentially a cross-tabulation frequency table. The nominal variable is compulsory annual women's health check-up for tragedy victims and other variable is women health improvement plans from the Government side. The values given are called scores, frequencies. The relationship between two variables cannot explain in the graph. Graph cannot be drawn because there is only one valid dimension. The requested number of dimension is greater than the maximum number of dimension. It's adjusted to 1. Correspondence analysis study the relationship with non-parametric variables.

**Chi-Square Tests**

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	.010 <sup>b</sup>	1	.921		
Continuity Correction <sup>a</sup>	.000	1	1.000		
Likelihood Ratio	.010	1	.921		
Fisher's Exact Test				1.000	.501
Linear-by-Linear Association	.010	1	.921		
McNemar Test				.000 <sup>c</sup>	
N of Valid Cases	500				

a. Computed only for a 2x2 table

b. 0 cells (.0%) have expected count less than 5. The minimum expected count is 62.48.

c. Binomial distribution used.

Table 3: 2

Chi-square test is used to find if there is any kind of relationship between the categorical variables. The two variables which have given above consist of more than two categorical variables. The value of test statistic is .010.

The variables such as Compulsory annual women's health check-up for tragedy victims and Women health improvement plans from the Government are dependent, they are related each other. Sig. value is less  $< 0.05$ . Since the  $p$  – value is less than our chosen significance level  $< 0.05$  we can reject this hypothesis and finalize that there is relation between Compulsory annual women's health check-up for tragedy victims and Women health improvement plans from the Government. Both have a significant association.

#### Variable – IV

a. Does any of the political parties represent and express your views?

I) Yes  II) No

b. Any women activist in the forefront of fight for compensation ?

I) Yes  II) No  III) Not Aware

**Correspondence Table**

Political parties represent and express your view s	Women activist in the forefront of fight for compensation			Active Margin
	Yes	No	Not A ware	
Yes	52	292	9	353
No	11	77	1	89
Active Margin	63	369	10	442

Table 4: 1

The Correspondence Table displays the frequency for each category of each variable; it is essentially a cross-tabulation frequency table.

The nominal variable is any of the political parties represent and express your views and other variable is women activist in the forefront of fight for compensation. The values given are called scores, frequencies .The relationship between two variables cannot explain in the graph. Graph cannot be drawn because there is only one valid dimension. The requested number of dimension is greater than the maximum number of dimension. It's adjusted to 1.

Correspondence analysis study the relationship with non-parametric variables.

#### Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	2.911 <sup>a</sup>	6	.820
Likelihood Ratio	4.098	6	.663
Linear-by-Linear Association	.451	1	.502
N of Valid Cases	500		

a. 4 cells (33.3%) have expected count less than 5. The minimum expected count is .36.

Table 4: 2

Chi-square test is used to find if there is any kind of relationship between the categorical variables. The two variables which have given here consist of more than two categorical variables. The value of test statistic is 2.911. The variables such as Political parties represent and express your views and Women activist in the forefront of fight for compensation are independent, they are not related each other. Sig. value is greater  $>0.05$ . Since the p – value is greater than our chosen significance level  $> 0.05$  we can accept this hypothesis and finalize that there is relation between Political parties represent and express your views and Women activist in the forefront of fight for compensation. Both have a significant association.

