



## IMPACT OF IEC IN HIV/AIDS AWARENESS IN EAST GODAVARI DISTRICT, ANDHRA PRADESH

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### ABSTRACT

*Despite ongoing Information, Education, and Communication (IEC) activities to control Human Immunodeficiency Virus (HIV) infection and reduce Acquired Immune Deficiency Syndrome (AIDS)-related deaths, interventions have not resulted decrease in positive cases. The programmes, most often, were unable to change attitudes of people for practising safe sex and avoiding sex with non-regular partners. The objective of the present study is to assess awareness and knowledge about HIV/AIDS among general population of East Godavari district in Andhra Pradesh.*

*Convenience sampling was adopted for selecting 250 respondents from 50 mandals. They were examined using structured and closed-ended questionnaire on exposure to communication channels for receiving information, leading to increase in awareness about HIV/AIDS. In the hypothesis testing using chi-square, no significant relationship was established between the age and exposure to IEC activities and watching HIV/AIDS advertisements on television, hoardings, and wall paintings. The reach of various awareness campaigns was limited. However, a significant relationship between age and HIV/AIDS advertisements in daily newspapers and exposure to government advertisements through various communication channels was found to be well received. The IEC activities need to be customised for creating HIV/AIDS awareness among the targeted population and focus required for designing IEC strategy specific to high-risk groups.*

**KEYWORDS:** HIV/AIDS; IEC; NACO, APSACS; East Godavari; Andhra Pradesh, India

### INTRODUCTION

HIV/AIDS is still prevalent in India even though several mass awareness campaigns and interpersonal communication activities have been undertaken in the last three decades after the first HIV case detected in 1986. The rise in HIV cases was not be construed as a health issue related to particular group of individuals infected with virus but also has ramifications on socioeconomic conditions of the country. The nation has to spend funds towards improving medical infrastructure, procurement of medicines, availability of nutritious food for HIV infected, and focus on increasing awareness and knowledge of people. Not only that, the infection also reduces human capital to the nation. Further, financial burden on HIV infected households.

On behavioural aspect, still people infected with virus are scared to talk with peers about HIV/AIDS, fearing stigma and discrimination. Poverty, illiteracy, migration, and gender inequality are some of the detrimental factors for reduction in HIV cases. Andhra Pradesh (AP) is one of the few states which has highest number of positive cases compare to national average. East Godavari has reported a greater number of HIV positive cases among all

districts. The study is undertaken to know the impact of IEC activities among general population.

The Information, Education and Communication (IEC) campaigns have been used widely in several countries for creating awareness, increasing knowledge, leading to change in health behaviour of individuals. The World Health Organisation (WHO) defined the IEC as an 'approach to change a set of behaviours in a targeted group regarding a specific problem in a pre-defined period of time' (Clift, 2001) [1].

In 1986, after the first HIV case reported in Chennai and some other parts of India, the Indian government had constituted a National AIDS Committee (NAC) under the aegis of the Ministry of Health and Family Welfare (MoHFW) (Kadri & Kumar, 2012) [2]. To control the spread of HIV, the IEC had become the part of the first phase of the National AIDS Control Programme (NACP) launched in 1992. As there is no cure or vaccine to provide solace to people living with HIV and AIDS, only option was to counter the epidemic was prevention. Airhihenbuwa and Obregon (2000) have stated that an effective communication strategy based on a sound theory in different regional and cultural contexts becomes pivotal in controlling the spread of infection [3].

In a developing country like India, sustained and continuous efforts are needed to change the behaviour of people towards health. An individual's sexual health behaviour is determined by his/her upbringing in the society and influence of its culture and personal experiences. In the initial years, India had adopted the 'Entertainment-Education (EE) approach' to prevent spread of HIV/AIDS (Singhal, Rogers, Cody, & Sabido, 2004) [4]. It was highly effective as television and radio have played significant role in creating awareness and knowledge about infection. But, change in behaviour had not resulted as expected. Since then, divergent theories were included in IEC to bring behavioural change among key population towards HIV/AIDS by using every communication component. R T Sudha et al., (2005) in her study conducted in Hyderabad on awareness, attitudes and beliefs of the general public towards HIV/AIDS, it was found that majority respondents had incorrect perceptions about mode of HIV transmission and prevention despite executing many outreach programmes for the last several years [5]. They also stressed on the need for improving HIV/AIDS awareness levels through educational programmes for people living in lower-strata of society in the city. With a diversified population, India needs to execute a consistent, prolonged and sustainable campaigns for effective results. With the consistent promotion campaigns, a sharp rise in use of condoms witnessed for prevention of pregnancy among young women (Cleland & Ali, 2006) [6]. Myhre and Flora (2010) have conducted detailed research on 41 articles from 17 countries published in various journals to find the effectiveness of six communication components — target audience, channel selection, message content, campaign slogan, outcome of campaign, and campaign effectiveness — in mass media campaigns on HIV/AIDS at national

level. They have concluded that most campaigns have targeted broader audience ignoring high risk groups [7]. Mahapatra, T. (2014) had found that existing knowledge, attitudes, and beliefs of people towards HIV/AIDS haven't changed even though the IEC materials have played a positive impact to some extent (Mahapatra, 2014) [8].

### Objectives of the study

- To analyse the impact of IEC activities related to HIV/AIDS among general population
- To examine as to whether IEC strategies played a major role in creating HIV/AIDS awareness between different age groups

### METHODOLOGY

East Godavari district in Andhra Pradesh has been selected because of high HIV positive cases. In the first stage, 50 mandals out of 64 in the district were selected using simple random sampling. In the second stage, respondents from each mandal were selected using convenience sampling method.

**Data collection:** For the purpose of the study, primary and secondary sources were used. A pre-designed questionnaire was administered to the respondents for collection of primary data. The secondary data was collected from the journal articles, books, annual reports, and documents. Various tools of the statistics were employed for the present study. It includes frequency distribution and percentages. The data is interpreted using chi-square on demographic variables and dependent factors.

**Data analysis:** The following tables summarises the demographic characteristics of the respondents participated in the study.

**Table No. 1.1: Gender of the respondents N=250**

S. No.	Gender	Respondents	Percentage
1	Male	189	75.6
2	Female	61	24.4
3	Total	250	100

From the above table, 75.6 per cent are male (189) and 24.4 per cent are female (61).

**Table No. 1.2: Marital status of the respondents N=250**

S. No.	Marital status	Respondents	Percentage
1	Married	139	55.6
2	Single	108	43.2
3	Divorced/separated	3	1.2
	Total	250	100

Based on the above table, 139 respondents (55.6 per cent) are married, 108 are single (43.2 per cent) and 3 are either divorced or separated.

**Table No. 1.3: Age of the respondents N=250**

S. No.	Age	Respondents	Percentage
1	15-25	87	34.8

2	26-40	107	42.8
3	41-50	56	22.4
	Total	250	100

Regarding the age, 87 respondents (34.8 per cent) are in the category of 15 and 25, 107 (42.8 per cent) belongs to 26 to 40 category, and remaining respondents (56) are in the age group of 41 and 50.

**Table No. 1.4: Occupation of the respondents N=250**

S. No.	Occupation	Respondents	Percentage
1	Employee	77	30.8
2	Businessmen	20	8.0
3	Worker	41	16.4
4	Labourer	15	6.0
5	Farmer	19	7.6
6	Traditional occupation	12	4.8
7	Unemployed	66	26.4
	Total	250	100

The above table shows the occupation of the respondents. Among 250, majority constitutes employees (30.8 per cent) followed by unemployed (26.4 per cent). 41 respondents are workers, 20 are businessmen, 19 are farmers, 15 labourers and 12 are involved in traditional occupations.

**Table No. 1.5: Education of the respondents N=250**

S. No.	Education	Respondents	Percentage
1	Illiterate	14	5.6
2	Literate till 5th	10	4.0
3	6th to 10th	56	22.4
4	11th to graduation	143	57.2
5	PG and above	27	10.8
	Total	250	100

The percentage of respondents' distribution with regard to education are, 5.6 per cent are illiterates, 4 per cent have studied till fifth standard and 56 per cent are in the category of sixth and tenth standards. Majority respondents (143 from the total of 250) have completed education from 11th standard to graduation. 27 respondents have finished post-graduation and above.

**Table No. 1.6: Social status of the respondents N=250**

S. No.	Social status	Respondents	Percentage
1	SC	65	26.0
2	ST	49	19.6
3	BC	87	34.8
4	OC	49	19.6
	Total	250	100

It is found from the above table regarding social status, 65 respondents belong to SC, 49 are from ST community, 87 are BCs and rest 49 are in OC category.

**Table No. 1.7: Religion of the respondents N=250**

S. No.	Religion	Respondents	Percentage
1	Hindu	192	76.8
2	Muslim	9	3.6
3	Christian	49	19.6
4	Others	0	0.0
	<b>Total</b>	<b>250</b>	<b>100</b>

From the above table, 192 respondents belong to Hindu religion, 9 Muslims and 49 are Christians.

**Age and other variables:** The subsequent tables present the chi-square values and whether the relationship is significant between the variables or not.

**Table No: 2.1: Exposure to IEC activities related to HIV/AIDS awareness N=250**

	15-25		26-40		41-50		Total	
	Count	%	Count	%	Count	%	Count	%
Newspaper	23	26.4	14	13.1	9	16.1	46	18.4
Television	7	8.0	10	9.3	5	8.9	22	8.8
Radio	3	3.4	0	0.0	1	1.8	4	1.6
Social media	11	12.6	5	4.7	3	5.4	19	7.6
Cinema halls	0	0.0	3	2.8	2	3.6	5	2.0
Hoardings	0	0.0	3	2.8	0	0.0	3	1.2
Street play	2	2.3	0	0.0	0	0.0	2	.8
IEC vans	1	1.1	0	0.0	0	0.0	1	.4
Rallies	3	3.4	0	0.0	0	0.0	3	1.2
Posters	3	3.4	2	1.9	1	1.8	6	2.4
Any two or more options	34	39.1	70	65.4	35	62.5	139	55.6
<b>Total</b>	<b>87</b>	<b>100</b>	<b>107</b>	<b>100</b>	<b>56</b>	<b>100</b>	<b>250</b>	<b>100</b>

**Chi-Square Test**

	Value	df	Asymp. Sig. (2-sided)
<b>Pearson Chi-Square</b>	<b>38.272</b>	<b>20</b>	<b>.008</b>

H0: There is no statistically significant relationship between the age and exposure to IEC activities

H1: There is statistically significant relationship between the age and exposure to IEC activities.

The chi-square test value 38.272 is more than the table value of 31.410 for twenty degrees of freedom at 0.05 level of significance. As the p value .008 of the above table is less than 0.05, null hypothesis is rejected and alternate hypothesis is accepted. Therefore, it is inferred that the IEC activities and exposure of respondents are statistically significant.

**Table No: 2.2: Watched HIV/AIDS advertisements on TV N=250**

	15-25		26-40		41-50		Total	
	Count	%	Count	%	Count	%	Count	%
Doordarshan	69	79.3	86	80.4	50	89.3	205	82.0
Star TV network	11	12.6	11	10.3	3	5.4	25	10.0
UTV	1	1.1	4	3.7	1	1.8	6	2.4
Sony Pix	3	3.4	6	5.6	0	0.0	9	3.6
AXN	1	1.1	0	0.0	0	0.0	1	.4
MTV	2	2.3	0	0.0	2	3.6	4	1.6
Total	87	100	107	100	56	100	250	100

**Chi-Square Test**

	Value	df	Asymp. Sig. (2-sided)
<b>Pearson Chi-Square</b>	<b>12.182</b>	<b>10</b>	<b>.273</b>

H0: There is no statistically significant relationship between the age and watching HIV/AIDS advertisements on television

H2: There is statistically significant relationship between the age and watching HIV/AIDS advertisements on television

The chi-square test value 12.182 is less than the table value of 18.307 for ten degrees of freedom at 0.05 level of significance. As the p value .273 of the above table is more than 0.05, null hypothesis rejected and alternate hypothesis accepted. Hence, it is inferred that the HIV/AIDS advertisements on TV and frequency of watching are not statistically significant.

**Table No: 2.3: Listened HIV/AIDS- related programmes on radio N=250**

	15-25		26-40		41-50		Total	
	Count	%	Count	%	Count	%	Count	%
Panel discussion	34	39.1	51	47.7	25	44.6	110	44.0
Phone-in	14	16.1	10	9.3	5	8.9	29	11.6
Jingle	1	1.1	1	.9	1	1.8	3	1.2
None	38	43.7	45	42.1	25	44.6	108	43.2
Total	87	100.0	107	100.0	56	100.0	250	100.0

**Chi-Square Test**

	Value	df	Asymp. Sig. (2-sided)
<b>Pearson Chi-Square</b>	<b>3.426</b>	<b>6</b>	<b>.754</b>



H0: There is no statistically significant relationship between the age and listening HIV/AIDS programmes on radio

H3: There is statistically significant relationship between the age and listening HIV/AIDS programmes on radio

The chi-square test value 3.426 is less than the table value of 12.591 for six degrees of freedom at 0.05 level of significance. As the p value .754 is more than 0.05, it is inferred that the HIV/AIDS-related programmes on radio and frequency of listening are not statistically significant.

**Table No: 2.4: Watched HIV/AIDS hoardings and display boards N=250**

	15-25		26-40		41-50		Total	
	Count	%	Count	%	Count	%	Count	%
Railway stations	26	29.9	20	18.7	8	14.3	54	21.6
Bus shelters	28	32.2	32	29.9	21	37.5	81	32.4
National highways	7	8.0	18	16.8	9	16.1	34	13.6
Dhabas	3	3.4	2	1.9	1	1.8	6	2.4
Truck halt points	2	2.3	3	2.8	2	3.6	7	2.8
Toll plazas	3	3.4	5	4.7	2	3.6	10	4.0
Rail stations +bus shelters	18	20.7	27	25.2	13	23.2	58	23.2
<b>Total</b>	<b>87</b>	<b>100.0</b>	<b>107</b>	<b>100.0</b>	<b>56</b>	<b>100.0</b>	<b>250</b>	<b>100.0</b>

**Chi-Square Test**

	Value	df	Asymp. Sig. (2-sided)
<b>Pearson Chi-Square</b>	<b>9.718</b>	<b>12</b>	<b>.641</b>

H0: There is no statistically significant relationship between the age and watching HIV/AIDS hoardings and display boards

H5: There is statistically significant relationship between the age and watching HIV/AIDS hoardings and display boards

The chi-square test value 9.718 is less than the table value of 21.026 for twelve degrees of freedom at 0.05 level of significance. As the p value .641 is more than 0.05, there is no significance between the HIV/AIDS hoardings and display boards and frequency of watching.

**Table No: 2.5: Watched HIV/AIDS advertisements in daily newspapers N=250**

Age	15-25		26-40		41-50		Total	
	Count	%	Count	%	Count	%	Count	%
Yes	57	65.5	90	84.1	47	83.9	194	77.6
No	30	34.5	17	15.9	9	16.1	56	22.4
<b>Total</b>	<b>87</b>	<b>100.0</b>	<b>107</b>	<b>100.0</b>	<b>56</b>	<b>100.0</b>	<b>250</b>	<b>100.0</b>

**Chi-Square Test**

	Value	df	Asymp. Sig. (2-sided)
<b>Pearson Chi-Square</b>	<b>11.208</b>	<b>2</b>	<b>.004</b>

H0: There is no statistically significant relationship between the age and watching HIV/AIDS advertisements in daily newspapers

H4: There is statistically significant relationship between the age and watching HIV/AIDS advertisements in daily newspapers

The chi-square test value 11.208 is more than the table value of 5.991 for two degrees of freedom at 0.05 level of significance. As the p value .004 is less than 0.05, it was inferred that there is significant association between the HIV/AIDS advertisements in daily newspapers and frequency of watching.

**Table No: 2.6: Watched HIV/AIDS wall paintings and writings N=250**

Age	15-25		26-40		41-50		Total	
	Count	%	Count	%	Count	%	Count	%
Yes	69	79.3	90	84.1	49	87.5	208	83.2
No	18	20.7	17	15.9	7	12.5	42	16.8
Total	87	100.0	107	100.0	56	100.0	250	100.0

**Chi-Square Test**

	Value	Df	Asymp. Sig. (2-sided)
<b>Pearson Chi-Square</b>	<b>1.746</b>	<b>2</b>	<b>.418</b>

H0: There is no statistically significant relationship between the age and watching HIV/AIDS wall paintings and writings

H6: There is statistically significant relationship between the age and watching HIV/AIDS wall paintings and writings.

The chi-square test value 1.746 is less than the table value of 5.991 for two degrees of freedom at 0.05 level of significance. As the p value .418 is more than 0.05, it is inferred that the HIV/AIDS wall paintings and writings and frequency of watching are not statistically significant.

**Table No: 2.7: Awareness of HIV/AIDS campaign N=250**

	15-25		26-40		41-50		Total	
	Count	%	Count	%	Count	%	Count	%
Azadi ka Amrit Mahostav	0	0.0	3	2.8	2	3.6	5	2.0
Red Ribbon	48	55.2	59	55.1	27	48.2	134	53.6
PM Surakshit Matritva Abhiyan	1	1.1	9	8.4	0	0.0	10	4.0



North-East multimedia campaign	1	1.1	1	.9	0	0.0	2	.8
Yes	2	2.3	5	4.7	9	16.1	16	6.4
No	35	40.2	30	28.0	18	32.1	83	33.2
Total	87	100.0	107	100.0	56	100.0	250	100.0

**Chi-Square Test**

	Value	df	Asymp. Sig. (2-sided)
<b>Pearson Chi-Square</b>	<b>26.128</b>	<b>10</b>	<b>.004</b>

H0: There is no statistically significant relationship between the age and HIV/AIDS awareness campaigns

H7: There is statistically significant relationship between the age and HIV/AIDS awareness campaigns

The chi-square test value 26.128 is more than the table value of 18.991 for ten degrees of freedom at 0.05 level of significance. As the p value .004 is less than 0.05, it is inferred that the HIV/AIDS awareness campaigns in relation to age are statistically significant.

**Table No: 2.8: Government advertisements on HIV/AIDS**

**N=250**

Age	15-25		26-40		41-50		Total	
	Count	%	Count	%	Count	%	Count	%
Television	36	41.4	48	44.9	32	57.1	116	46.4
Newspaper	22	25.3	35	32.7	14	25.1	71	28.4
Radio	0	0.0	6	5.6	1	1.8	7	2.8
Website	1	1.1	0	0.0	0	0.0	1	.4
Social media	18	20.7	7	6.5	0	0.0	25	10.0
All of the above	10	11.5	11	10.3	9	16.1	30	12.0
Total	87	100.0	107	100.0	56	100.0	250	100.0

**Chi-Square Test**

	Value	df	Asymp. Sig. (2-sided)
<b>Pearson Chi-Square</b>	<b>28.549</b>	<b>10</b>	<b>.001</b>

H0: There is no statistically significant relationship between the age and government advertisements on HIV/AIDS

H8: There is statistically significant relationship between the age and government advertisements on HIV/AIDS

The chi-square test value 28.549 is more than the table value of 18.307 for ten degrees of freedom at 0.05 level of significance. As the p value .001 is less than 0.05, it is inferred that the age and government advertisements on HIV/AIDS are statistically significant.

**Table No: 2.9: Folk skits and puppet shows on HIV/AIDS**  
**N=250**

Age	15-25		26-40		41-50		Total	
	Count	%	Count	%	Count	%	Count	%
Yes	13	14.9	31	29	16	28.6	60	24.0
No	74	85.1	76	71.0	40	71.4	190	76.0
Total	87	100.0	107	100.0	56	100.0	250	100.0

**Chi-Square Test**

	Value	df	Asymp. Sig. (2-sided)
<b>Pearson Chi-Square</b>	<b>6.005</b>	<b>2</b>	<b>.050</b>

H0: There is no statistically significant relationship between the age and watching folk skits and puppet shows related to HIV/AIDS

H10: There is statistically significant relationship between the age watching folk skits and puppet shows related to HIV/AIDS

The chi-square test value 6.005 is more than the table value of 5.991 for two degrees of freedom at 0.05 level of significance. As the p value .050 is more than 0.05, it is inferred that watching folk skits and puppet shows related to HIV/AIDS and age are not statistically significant.

**Table No: 2.10: Did sex education teach in schools and colleges**  
**N=250**

Age	15-25		26-40		41-50		Total	
	Count	%	Count	%	Count	%	Count	%
Yes	49	56.3	57	53.3	40	71.4	146	58.4
No	35	40.2	34	31.8	14	25.0	83	33.2
School+college	3	3.4	16	15.0	2	3.6	21	8.4
Total	87	100.0	107	100.0	56	100.0	250	100.0

**Chi-Square Test**

	Value	df	Asymp. Sig. (2-sided)
<b>Pearson Chi-Square</b>	<b>14.233</b>	<b>4</b>	<b>.007</b>

H0: There is no statistically significant relationship between the gender and sex education in schools and colleges

H8: There is statistically significant relationship between the gender and sex education in schools and colleges

The chi-square test value 14.233 is more than the table value of 9.487 for four degrees of freedom at 0.05 level of significance. As the p value .007 is less than 0.05, it is inferred that the HIV/AIDS awareness campaigns and age are statistically significant.

**RESULTS AND CONCLUSIONS**



After testing the hypothesis, it was found that there was no significant relationship between age and watching advertisements on television, hoardings, display boards, wall paintings, writings and teaching sex education in schools and colleges as the probability value was more than 0.05. The chi-square test has revealed that there is a significant relationship (probability value was less than 0.05) between age and watching HIV/AIDS advertisements in daily newspapers and respondents' exposure to IEC activities, HIV/AIDS awareness campaigns and government advertisements through newspaper, television, radio, website and social media.

The study has found that the present IEC activities need to be tailor-made in creating HIV/AIDS awareness among the targeted population. The reach of government advertisements through print, radio, electronic and social media was effective. More focus should be on designing IEC strategy specific to high-risk groups.

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