

Social-Psychological and Spatial Context of Spread of HIV/AIDS in Himachal Pradesh: An Assessment of the Impact of different Information, Education, and Communication (IEC) Activities.

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Abstract

Himachal Pradesh is epidemiologically categorized as a medium HIV-prevalence state characterized by a concentrated epidemic pattern. While clinical treatments like Antiretroviral Therapy (ART) have significantly expanded, the containment of the virus is profoundly constrained by intertwined socio-psychological factors. Stigmatization, social rejection, and internal psychological distress remain deeply entrenched within the conservative socio-cultural fabric of the state's rural and semi-urban communities. This work analyzes the socio-psychological variables fueling the spread of HIV/AIDS in Himachal Pradesh and evaluates the structural impact of Information, Education, and Communication (IEC) activities spearheaded by the Himachal Pradesh State AIDS Control Society (HPSACS) and other social organizations. The hidden trajectory of the HIV epidemic in Himachal Pradesh is heavily influenced by psychosocial burdens that actively impede health-seeking behaviors. Impact of IEC Activities to disrupt these negative socio-psychological feedback loops, HPSACS has systematically deployed multi-layered IEC and Behavior Change Communication (BCC) frameworks: Mass Media & Grassroots Saturation: Intensive mass media campaigns utilizing localized All India Radio (AIR) stations (Shimla, Hamirpur, Dharamshala) and regional Doordarshan telecasts have broadly normalized the conversation surrounding HIV, effectively correcting severe structural misconceptions regarding transmission. Targeted Youth Interventions: Through the institutionalization of Red Ribbon Clubs in collegiate, technical, and senior secondary schools, the state has actively targeted adolescents. Morning assembly pledges and peer-led discourse have demonstrably reduced peer-rejection dynamics and discriminatory attitudes among the state's youth. Socio-psychological vulnerabilities in Himachal Pradesh act as severe structural catalysts for the hidden spread of HIV by suppressing voluntary testing and treatment adherence. While target-driven IEC campaigns have successfully elevated basic public knowledge and mitigated overt discrimination, a persistent core of internalized stigma remains. Future interventions must pivot from generalized awareness to robust, community-level psychosocial support systems and mental health integrations to permanently dismantle the social architecture of the epidemic.

Keywords: *HIV/AIDS, Information, Education, Communication, Socio-Psychological Stigma, Quality of Life, intervention.*

Introduction

The epidemic spread of HIV/AIDS continues to be a major global public health issue. It has claimed more than 39 million lives of the 78 million people it has affected worldwide since 1981. In 2013, while 2.1 million individual worldwide become newly infected with HIV, 1.5 (1.4-1.7) million people died from HIV related causes (WHO, 2014).

Making any sense of the damage done by this disease in the American gay community and African continent, it is certainly a humanitarian disaster. The worldwide expressed concerns over the devastating impacts of HIV/AIDS are

sufficient to indicate that it is a disease that poses the most formidable health challenge to humans. Being associated with sexual behaviour, blood transfusion, drug abuse and other behavioural aspects, this is also a big behavioural challenge.

The Human Immunodeficiency Virus (HIV) targets the immune system and weakens people's surveillance and defense system against infections. This virus impairs functions of immune cells, which results in susceptibility to wide range of infections and diseases. The most advanced stage of HIV infection is Acquired Immunodeficiency Syndrome (AIDS), which can take 2 to 15 years to develop in the individual.

Received first in the gay community of America, in the second last decade of 20th century, doctors referred to the disease caused by it as a 'Gay Plague' and officially labeled it Gay Related Immune Deficiency (GRID). After protest of the gay activist the name was changed to Acquired Immune Deficiency Syndrome (AIDS). Thomas et al (1997:11-12) have explained the nature of HIV:

HIV is a very small, fragile virus and soon dies outside the body...A person may be infected with HIV and might perfectly well with no physical symptoms i.e., HIV non-symptomatic. As the disease progresses, the person will begin to have different illnesses and physical symptoms, i.e. HIV symptomatic. The terms AIDS is used when the disease has progressed and the persons develop one or more serious infections or condition...Strictly speaking AIDS is the last or the fatal stage of HIV infection.

The maximum concentration of this virus in the infected person is in the blood and next highest concentration is in the semen besides it is also present in urine, saliva, mother's milk and vaginal secretions.

The symptoms of HIV are non-specific and only HIV specific test can confirm this. The incubation period is estimated to be a period between five months from the time of HIV infection to 15 years or more. Conclusively, HIV is an invisible, silent and slow killer. The person with HIV infection may lose more than ten per cent of their weight, and may have chronic diarrhoea, prolonged fever, suffer from problems with their skin, glands, or throat, and vulnerable to diseases like pneumonia certain type of cancer and tuberculosis.

Being opportunistic in nature, HIV decays the human skills and capabilities with utmost silence. It takes very less time to convert into epidemic as compared to other diseases. Besides having detrimental effects on social institutions it tend to impede national income growth (Bloom and Mahal, 1997a, 1997b). It is considered a potential threat to human development process, which follows humanitarian interests and aim at creating healthy lives.

Arising out of the physiological, psychological or socio-cultural malfunctioning, this disease affects individual, his family members and the whole social network. The people living with AIDS became isolated from the daily routine of community, encounter severe depression and helplessness and may be a victim of social ostracism (Murthy, 2008). Empirical evidences have shown that it rendered individual unemployed (Barnes et al, 2005), lessen life expectancy at birth (World Development Report, 2006), affects quality of life; worsen the living conditions and sharply increasing the difference between the rich and poor societies.

On socio-economic considerations, HIV/AIDS is an unusually costly disease, which has imposed varieties of monetary and non-monetary costs in society. Monetary costs relates to direct investment in the medical care by individual, private and public agencies in fighting the infections contributed by the HIV. Non-monetary costs include lost value of market and non-marketable output. However, both kinds cost tends to vary with prevalence of HIV in different, horizontal and vertical, social groups (Farnham, 1995).

The challenges are also on account of gender differentiation. Men are twice more effective transmitter of sexually transmitted infections (STI) and HIV infection and for most kind of infections men are more often infected than women (Ramasubban, 2000; Trivers, 1985). Beyond gender considerations, for spreading HIV/AIDS, there is something very basic in human sexuality, especially that of human male (Hans, 1997). It is also argued that it is easier for a man to pass the infection to a woman and not vice-versa.

In addition, HIV/AIDS disproportionately afflicts individuals in their prime productive years. Out of the total 35 million people worldwide living with HIV/AIDS in 2013, 3.2 million were children below 15 years of age. The unsafe sexual practices of the young people are the additive factors (Hynie, 1998). Worldwide 70% of HIV is estimated to be transmitted through heterosexual intercourse and 75% to 85% of HIV in adult is due to without condom sex. In India, in different empirical studies (Bharat, 1995, 1997; Bhattacharya and Senapati, 1994; Pitaynon et al, 1997), the age groups of people living with AIDS has been found to be between 15-45 years.

This concern is more serious when good health is not equally available to all young people. World Development Report, 2007 revealed the fact that:

The average 15 years old boy has a 90 percent chance of surviving to the age of 60 in Western Europe or North America but only a 50 percent chance in Sub-Saharan Africa mainly due to communicable diseases such as AIDS. In countries hardest hit by AIDS, the probability is only 20 percent.

The dreary aspect of the situation is for each neutral case, there are likely to be an additional 50 to 100 virus infected people (Khurana, 1989:26).

Strategically, for containing the spread of HIV, population is divided into 'high risk group' and 'low risk group' and high risk group is being targeted urgently and immediately. The high risk groups, like female sex workers, men having sex with men, truckers and injecting drug users are being provided medical care, medicines, awareness and they are being educated to fight against the silent killer called HIV/AIDS.

The spatial patterns of prevalence of HIV/AIDS have shown regional variances in worldwide scenario, at national and State levels. Similar variances have been found to be in time frame (WHO, 2014; UNAIDS, 2014; NACO Technical Report, 2008; NACO Annual Report, 2011-12). In the times of globalisation, technological progression and somewhat sexualisation of the society, HIV/AIDS is a fundamental challenge to overall human behaviour. This is also related to basic human rights and provisions of health care, assurance of safety and benefits to the community. The concerns are also for prevention of harm of any kind while protecting privacy and confidentiality and meet the ends of humanitarian and global justice in view of the local sensitivities in social, cultural and spatial dimensions.

Extent and Magnitude of HIV/AIDS

According to World Health Organization, there were approximately 35 million people worldwide living with HIV/AIDS in 2013 including 3.2 million children below 15 years of age. It has been estimated that 2.1 million individual worldwide became newly infected with HIV in 2013 only which includes 240,000 children (<15 years). Most of these children were estimated to be infected by HIV-positive mothers during pregnancy, childbirth or breastfeeding.

The death toll estimated to be 39 million people since the first case was reported in 1981 out of which 1.5 million dies in 2013. It is understood that despite advances in scientific understanding of HIV and its prevention and treatment as well as year of significant efforts by the global health community, there is still no cure and most people living with HIV or at risk for HIV do not have access to prevention, care, and treatment. But prevention has helped to reduce HIV prevalence rates in a small but growing number of countries including India and new HIV infections are believed to be declining. At the end of 2013, 12.9 million people living with HIV were receiving antiretroviral therapy (ART) globally, of which 11.7 million were receiving ART in low and middle income countries. This is a 5.6 million increase in number of people receiving ART since 2010. However, it is estimated that almost 22 million other people living with HIV are still not accessing ART. Progress has also been made in preventing mother-to-child transmission of HIV and keeping mothers and children alive.

In India

The first case of HIV/AIDS was reported in India in Tamil Nadu in 1986. Since then the virus has spread from high risk groups to the general population and HIV is in almost all sections of society and in all geographical areas (Bharat, 1995;

Dube, 2000; Nag,1996). By the end of 2013, 5.7 million people were living with AIDS in India and mixed trends in the prevalence of HIV infection with regional variations have been noticed. The figures are doubted to be far less than actual numbers for two reasons-(a) no specific symptomatic nature of HIV/AIDS, and (b) social stigma attached to it due to its relations with sexual act. In the societies like India, where health care is not a major issue and to discuss sex or sex related diseases is considered shameful, it may be that the populations living with HIV/AIDS is more than it is detected and reported.

Empirical evidences have shown that the prevalence of HIV/AIDS follows social patterns. Pitayanon et al (1997) has found that HIV prevalence has a tilt toward low income groups. Lingam (1998) has located women in various migration studies and has concluded that migration endemic regions in country are seen as potential sites where disease is transmitted to women left behind like STDs and HIV/AIDS. In society like Indian, where caste also dictates the sexuality, it would not be wrong to consider that SC/ST groups are more vulnerable than others being socially disadvantaged groups. The women belonging to these groups are the most vulnerable groups being triply disadvantaged on account of sex differentiation, caste disabilities and income inequalities (India Health Report, 2003)

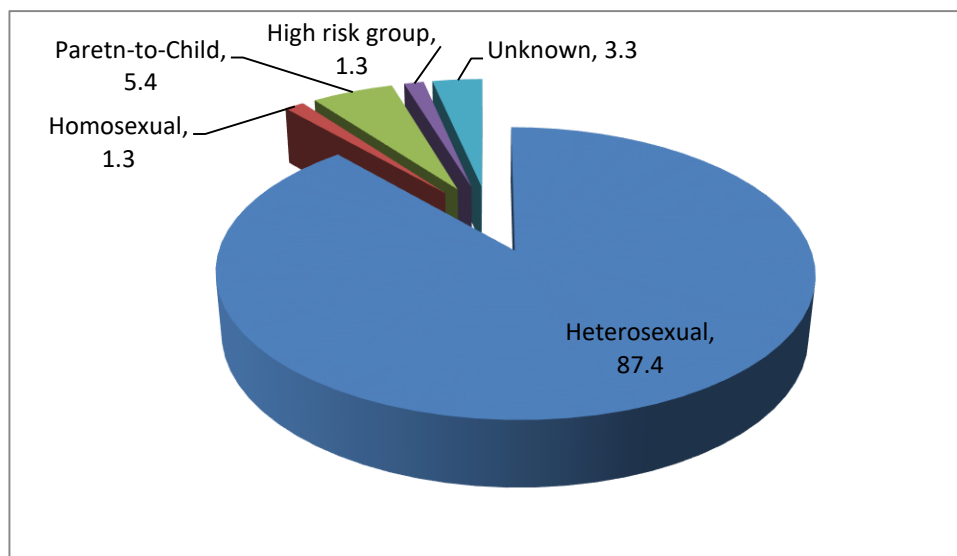
As per Census 2011, the total Indian population is 1.21 billion out of which 623.72 (51.54%) million were males and 586.47 (48.46%) were females. Out of the total population, 83.3 crore (68.84%) Indian live in rural areas while 37.7 crore (31.16%) resides in urban areas. As such, India shares 17.5% of the world population. Besides, it is also a fact India shares 14% of HIV of the total world population living with this virus.

As per the HIV Estimation, 2012, India has demonstrated an overall reduction of 57% in the annual new infections among adult population. The figure was 2.74 lakhs in 2000 which came to 1.16 lakhs in 2011. The adult HIV prevalence has decreased from 0.41% in 2001 to 0.27% in 2011. Also, the estimated people living with HIV has decreased from 24.1 lakh in 2000 to 20.9 lakhs in 2011. Wider access to ART has resulted in 29% reduction in estimated annual deaths due to AIDS related causes between the years 2007 to 2011. Despite such trends and achievements, India has third highest number of estimated people living with HIV/AIDS after South Africa and Nigeria (UNAIDS, 2014). The prevalence of HIV among pregnant women aged 15-24 years is showing a declining trend from 2005 and it has declined from 0.89% in 2005 to 0.39% in 2010-11(India Country Report 2014).

The spread of HIV/AIDS in India is a concentrated epidemic i.e. most of the HIV positivity is among the high risk groups. In this group, the prevalence is estimated to be 20 times higher than in general population. Major mode of transmission of HIV is found to be unprotected sex. It is found to be 87.4% by heterosexuals, 1.3% homosexuals, parents to child constitutes 5.4%, high risk group accounts for 1.6% and 3.3% have unknown reasons. Graph 1.1 provides a comprehensive view of the mode of transmission of HIV.

Graph 1

Modes of Transmission of HIV in India



As a result of systematic efforts of NACO, in past decade considerable decline has been noticed in new infections. In high risk groups itself considerable decline in HIV prevalence has been recorded especially in the past decade. Among female sex workers at national level it declined from 5.06% in 2007 to 2.67% in 2011. Declines have also been noticed among Men who have sex with Men (7.41% in 2007 to 4.43% in 2011). Stable trends have been noticed among the injecting drug users at national level i.e. 7.23% in 2007 to 7.14% in 2011. Further, the prevalence among the truckers is 2.59% and share of migrant population is 0.90%.

In Himachal Pradesh

In the year 1992, the first case of HIV was detected in the State. H.P.AIDS Control Society is working for prevention & control of HIV/AIDS since 1998. Between the periods from the year 2000-2003, the number of HIV-positive people raised from 201 to 531 and people living with AIDS increased from 72 to 143. The presence was mainly found to be in five district of the State i.e. Shimla, Bilaspur, Hamirpur, Mandi and Kangra mostly along the National Highway from Shimla to Kangra and Anandpur Sahib to Manali (Himachal Pradesh Development Report, 2005).

Going beyond, as per the HIV Sentinel Surveillance, 2010-11, HIV prevalence among the injecting drug users is 4.89%, among female sex workers it is 0.04% and prevalence among truckers and migrants shows 0% and HIV positivity among ANC is 0.4%.

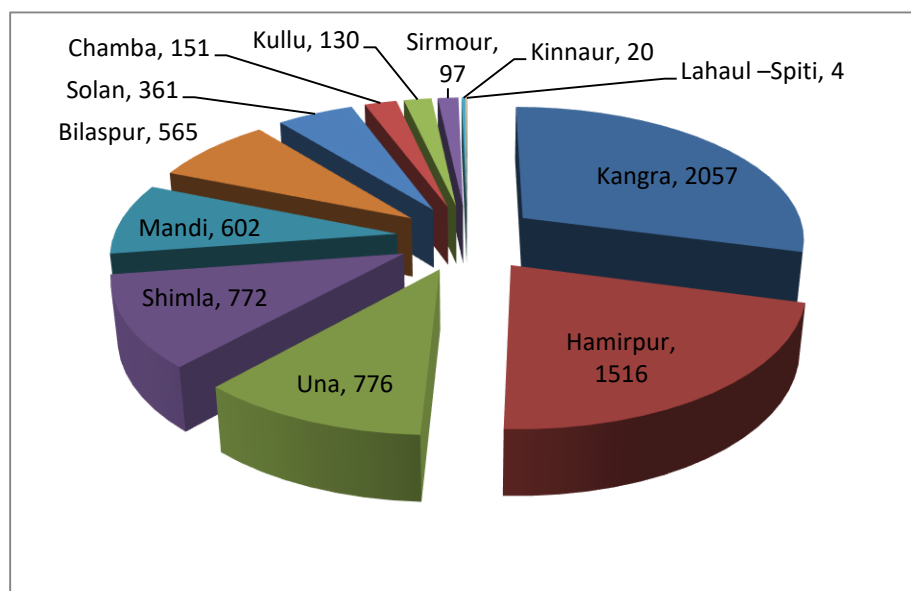
During the year 2011, there were total 5694 HIV-positive cases out of which 1536 were AIDS cases. For the year 2012, this figure rose to 6481 and in the year 2013, total 7206 HIV-positive cases were detected out of which 2501 were AIDS cases. The estimated cases of HIV in the State are 7346 and urban to rural routes of transmission of HIV have been noticed (HPSACS Annual Report 2012-13).

The HIV positive cases have been found to be unevenly scattered in all districts of the State and has shown spatial variations within the State itself. Despite being considered a hill State, Himachal Pradesh has the physical variations that include valleys, hills and tribal terrains which comprises of non-vegetation area. Such spatial variations have also been found to have been existed in the prevalence of HIV/AIDS in the State. The broader difference can be noticed that in the population residing in the high hills has less prevalence of this virus than the population in low hill areas.

District-wise presence of HIV positivity in 12 districts of the State can be visualised in Graph 2. The Graph 3 makes it evident that more than half of the total HIV positivity is detected in two districts of the State.

Graph 2

District-wise distribution of HIV positivity in H.P.



It can be seen that the three districts having tribal area i.e. Lahaul & Spiti, Kinnaur, and Chamba at a given point of time having 175 people having HIV or living with AIDS. These are part of high hills. But the three districts in the low hills i.e. Kangra, Hamirpur and Una have 4349 people having HIV positivity. For the sake of comparison, it may be said that the low hill districts have nearly 25 times higher HIV prevalence than the districts situated in higher hills.

In terms of HIV/AIDS prevalence, the State of Himachal Pradesh is low prevalence setting but knowledge level is varied in different social settings and different social groups. Empirical evidences have also shown that there is need to enhance knowledge about HIV prevalence and its prevention (Ghosh, 2008, Chauhan et al, 2013)

Method

The present study was designed to explore the knowledge, attitude and belief system of the people living in Himachal Pradesh in order to understand the impact of IEC activities related to awareness about HIV/AIDS.

Universe of the Study

This study has been carried out in the State of Himachal Pradesh. The geographical area of the State is 55673 kilometers. This area is spread across 12 districts of the State. Total population of the State is 68,56,509. (Census of India, 2011). Table provides the district-wise distribution of total population as well as area of each district.

Table -1 Area and Population of 12 Districts

Name of District	Area in Sq.Kms	Total population
Bilaspur	1167	381956
Chamba	6522	519080
Hamirpur	1118	454768
Kangra	5739	1510075
Kinnaur	6401	84121

Kullu	5503	437903
Lahaul&Spiti	13841	31564
Mandi	3950	999777
Shimla	5131	814010
Sirmour	2825	529855
Solan	1936	580320
Una	1540	521173
Total	55673	6856509

Gender wise, the total population of the State comprises of 34,73,892 males and 33,82,617 females. The literacy rate of State is 83.78 i.e. 51,04,506 persons are literate out of which 27,91,542 are males and 23,12,964 are females. Among males and females, the literacy rate is 90.63 and 76.60 respectively. With the population density (per square kilometres) of 123,61.76 lakh (90%) people lives in rural area and remaining 6.89 lakh (10%) are residing in urban areas.

Family Welfare Statistics in India,2011 considered the person in the dependent ages generally under 15 and over age 64 to those in economically productive ages 15-64 years in a population. With reference to the prevalence patterns of the HIV/AIDS in different age groups and the time period of existence of this disease, the economic productive age group population constitutes the universe of the study.

In Himachal Pradesh, total population in the age group of 15-64 years, as per Census of India, 2011, is 46,07,417. This segment of population comprises 23,06,401 males and 22,91016 females. The age-wise and gender-wise break-up of this segment of population are given in table 2.

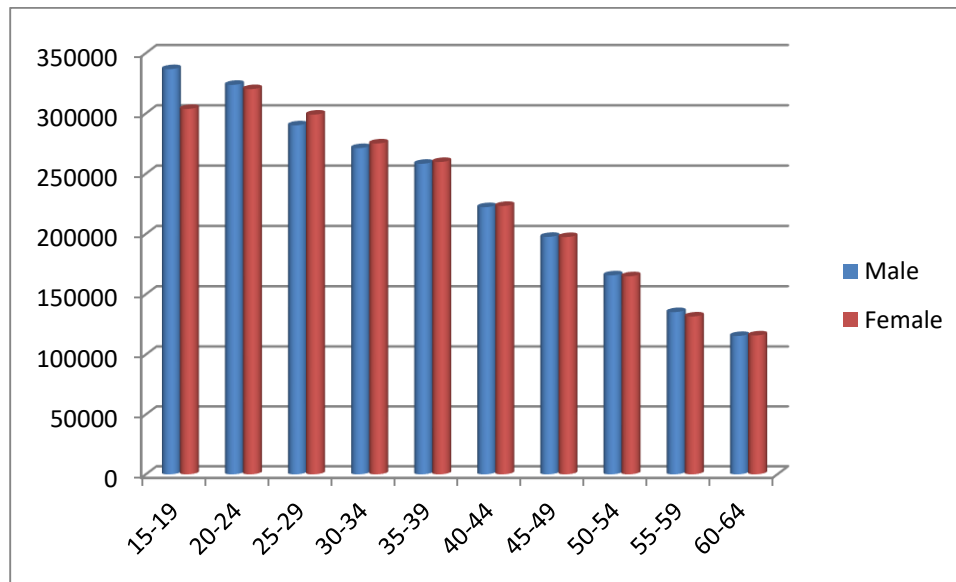
Table-2 Age-wise and Gender-wise distribution of population (15-64 years)

Age Group (years)	Total	Male	Female
15-19	640461	336729	303732
20-24	643866	323720	320146
25-29	589160	290125	299035
30-34	546357	271253	275104
35-39	517966	258230	259736
40-44	445560	222269	223291
45-49	395128	197642	197486
50-54	330687	165724	164963
55-59	266860	135245	131615
60-64	231372	115464	115908
Total	4607417	2306401	2291016

This segment of population is residing in rural as well as urban areas. The significant noticeable trend in the total population of different age group is that the lower age groups have higher population than the higher age groups. This being so, the inference derived is that the challenge of HIV/AIDS is subjected towards the young population of the State. Graph 2.1 provides the comparative population of males and females in 25-64 age groups.

Graph 3

Population in different age groups (25-64 years)



In terms of gender, in the age groups between 25 to 44 years, female have numerical dominance in the total population, as such, the threat of HIV/AIDS is more directed towards them as compared to males in the same age groups.

Further, the total population of this segment of population i.e. 15-64 years of age living in rural areas is 41,10,880 including 20,47,662 males and 20,63,218 females. In the age group of 15-64 years, the urban population is 4,96,537 which includes 2,68,739 males and 2,27,798 females.

In this age group, the urban and rural population ratio is 1:8.28. This implies that for one urban being there are more than 8 rural people, therefore, demographically the threat of HIV/AIDS is pointing the rural population more than the urban population. The detailed age-wise and gender-wise distribution of this segment of population has given in table -3 and 4.

Table-3

Age-wise and Gender-wise distribution of rural population (15-64 years)

Age Group (years)	Total	Male	Female
15-19	575991	300554	275437
20-24	573439	285167	288272
25-29	523605	255016	268589
30-34	485375	239272	246103
35-39	459275	227906	231369
40-44	394635	195137	199498
45-49	350793	173489	177304
50-54	295411	145792	149619
55-59	240093	119998	120095
60-64	212263	105331	106932
Total	4110880	2047662	2063218

Table -4

Age-wise and Gender-wise distribution of urban population (15-64 years)

Age Group (years)	Total	Male	Female
15-19	64470	36175	28295
20-24	70427	38553	31874
25-29	65555	35109	30446
30-34	60982	31981	29001
35-39	58691	30324	28367
40-44	50925	27132	23793
45-49	44335	24153	20182
50-54	35276	19932	15344
55-59	26767	15247	11520
60-64	19109	10133	8976
Total	496537	268739	227798

In order to have responses and for analytic purpose, this population has been regrouped in 6 different age groups by doubling the age difference between the lower and upper age limits. Tables 5 and 6 encompass the details.

Table -5

Gender-wise distribution population (15-64 years)

Age Group (years)	Male	Female
<20	336729	303732
20-30	613845	619181
30-40	529483	534840
40-50	419911	420777
50-60	300969	296578
>60	115464	115908
Total	2316401	2291016

Table -6

Area-wise and Gender-wise distribution of population (15-64 years)

Age Group (years)	Rural Male	Rural Female	Urban Male	Urban Female
<20	300554	275437	36175	28295
20-30	540183	556861	73662	62320
30-40	467178	477472	62305	57368
40-50	368626	376802	51285	43975
50-60	265790	269714	35179	26864
>60	105331	106932	10133	8976
Total	2047662	2063218	268739	227798

Research Design

Co-relational design was used to study the relationship of demographic and socio-economic status of respondents with the knowledge, attitude and belief system about HIV/AIDS.

Sampling and Participants

For having sample for study out of this population, one percent of the total in the different age group population between 15-64 years has been considered enough. Therefore, the total sample size is 4607 comprising of 2316 males and 2291 females in equal ratio in each age group.

The advantage of having this sample size in this age group is that the distribution of males and females is almost same. Besides, this is more economically and physically productive group than the other age groups. Moreover, some other studies carried out in the State have also considered this sample enough for assessing impact. The group-wise break up of sample has been given in table 7.

Table -7

Age-wise and gender-wise Distribution of Sample

Age Group (years)	Male	Female
<20	337	304
20-30	614	619
30-40	529	535
40-50	420	421
50-60	301	296
>60	115	116
Total	2316	2291

On further area-wise division of the sample provides that in the sample out of total 2316 males, 2047 are living in rural areas and 269 are in urban area. In respect of 2291 females, 2063 have origin in rural areas and 228 reside in urban areas. The details have been provided in table 8.

Table -8

Area-wise, Age-wise and Gender-wise Distribution of Sample

Age Group (years)	Male		Total	Female		Total
	Rural	Urban		Rural	Urban	
<20	300	37	337	275	29	304
20-30	540	74	614	557	62	619
30-40	467	62	529	477	58	535
40-50	369	51	420	377	44	421
50-60	266	35	301	270	26	296
>60	105	10	115	107	09	116
Total	2047	269	2316	2063	228	2291

According to 2011 census, in the total population of the State 25.19% (17,29,252 persons) are scheduled castes and 5.71% (3,92,126 persons) are scheduled tribes. District-wise distribution of SC and ST percentage population in the whole State population has been given in table 9.

Table -9

District-wise distribution of SC/ST population in HP

District	SC (%)	ST (%)
Bilaspur	25.92	2.80
Chamba	21.52	26.10
Hamirpur	24.02	0.67
Kangra	21.15	5.60

Kinnaur	17.53	57.95
Kullu	28.01	3.84
Lahaul–Spiti	07.08	81.44
Mandi	29.38	1.28
Shimla	26.51	1.08
Sirmour	30.34	2.13
Solan	28.35	4.42
Una	22.16	1.65
Total H.P.	25.19	5.71

Keeping in view the prevalence of the HIV/AIDS in all districts of the State of HP and population share of scheduled caste and scheduled tribes in all districts, it has been considered worthwhile to give them proper representation in the study sample. On the basis of this, their representation in the sample has been kept 25% and 5% respectively. Table -10 and 11 provides the details.

Table-10

Distribution of male SC/ST population in Study Sample

Age Group (years)	Males							
	Rural				Urban			
	SC	ST	Other	Total	SC	ST	Other	Total
<20	75	15	210	300	9	1	27	37
20-30	135	27	378	540	18	3	53	74
30-40	117	23	327	467	15	3	44	62
40-50	92	18	259	369	13	2	36	51
50-60	66	13	187	266	8	2	25	35
>60	26	5	74	105	2	0	8	10
Total	511	101	1435	2047	65	11	193	269

Table -11

Distribution of female SC/ST population in Study Sample

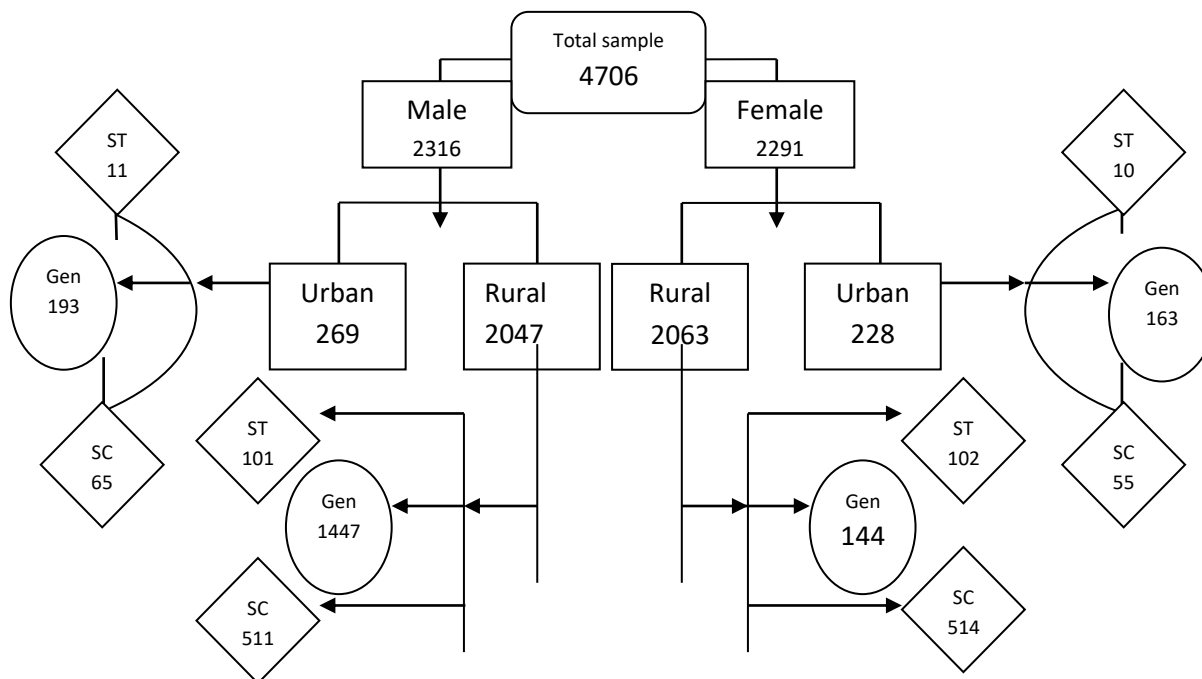
Age Group (years)	Females							
	Rural				Urban			
	SC	ST	Other	Total	SC	ST	Other	Total
<20	69	14	192	275	07	1	21	29
20-30	139	27	391	557	15	3	44	62
30-40	119	24	334	477	14	3	41	58
40-50	94	19	264	377	11	2	31	44
50-60	67	13	190	270	06	1	19	26
>60	26	05	76	107	02	0	07	09
Total	514	102	1447	2063	55	10	163	228

The sample size, thus drawn out of the total population i.e. the universal population is 46,07,417 (15-64 years). One percent of this universe has been taken as sample of the study.

The participants were selected from amongst those who were ready to share their experiences and knowledge with the assurance that the details provided by them shall be used to academic purpose and shall be kept confidential to the extent that their personal information shall not be revealed in any manner. The primary division of sample has been on the basis of age and rural and urban residential areas. The breakup of sample has been depicted in the following pictogram (Figure-1).

Figure 1

Break-up of the Sample of Study



Types of Data Collected

Two types of data have been collected. First type of data has been collected from the printed material i.e. books, journals, magazine, reports, and downloaded from internet for review of literature, and final comparison of results and findings.

The second type of data was obtained for understanding and assessing the social-psychological and spatial dimensions of spread of HIV/AIDS and impact of IEC activities directly from the respondents. For this responses have been obtained from the respondents by directly approaching them.

Tools for Data Collection

In order to have deep insight into the knowledge, attitudes and experiences of the respondents, quantitative and qualitative data was simultaneously obtained. To be categorical for exploring and assessing the knowledge of respondents about HIV/AIDS, the questions on two points scale was preferred i.e. the respondents were asked to indicate categorical 'yes' or 'no' and having insight into their attitudes and experiences the questions on five points scale was preferred. The quantitative questions were then followed by exploration of the reasons for either or any of their preferences.

This questionnaire (Appendix) thus prepared was pre-tested and designed to assess the knowledge of respondents about HIV/AIDS, the sources of information from which they used to get information about HIV, their attitudes towards such sources, social-psychological and spatial hindrances for prevention of HIV/AIDS and impact of IEC activities in rural and urban areas. It is designed to gather in-depth information, view of the respondents. While gathering information, it was endeavoured that the respondent may feel free to share his or her views and experiences confidently.

The approach was to establish rapport with the respondent first and then get information. For this firstly a contact person or intermediaries were identified in different part of the State, who facilitated the interview process with the respondents.

Since the information sought was quantitative as well as qualitative in nature, no restriction was imposed upon the respondents either to fill the questionnaire or to tell the interviewer. By giving this freedom to the respondents, the efforts were made to gather clear and categorical responses.

Though the questionnaire was in English, the interviewer asked the question in Hindi or local dialect where possible. The respondent responded in Hindi or mix of Hindi and English languages including the local dialects.

Procedures for Data Analysis

The quantitative data obtained from the respondents has been put to statistical analysis and the qualitative information obtained from the respondents has been put to content analysis. For having conclusions for the specific group of 15-49 years, which group is the most prone to HIV/AIDS, the data has been analysed in 5 age groups i.e. <20, 20-30, 30-40, 40-50 and >50. The results drawn have been discussed in the light of findings of the other studies and conclusions have been drawn.

Findings

This study aimed at finding social-psychological and spatial context of spread of HIV/AIDS in Himachal Pradesh and impact of different IEC activities carried out in the span for 5 years between the years 2008 to 2013. It is, by and large, accepted proposition that IEC activities have progressively enhanced individual awareness. It has widened the scope of information transmission from traditional to modern ways, from face to face to electronic media, from mere story-telling to advocacy oriented communication. This has indeed created a common culture, tradition and system of values. In the present times, mass media and information technology are powerful instrument for penetration into the rigid behaviours. It has its own challenges in different spaces, given the spatial variations and the state of society in which such activities are performed as excessive influence may threaten to undermine the existing culture and value system.

For assessing the impact knowledge, attitudes and belief of 4607 persons in the age group of 15-64 years has been gathered. Gender-wise they were 2316 males and 2291 females. On marital grounds, 2182 (1238 females, 944 males) were ever married and 2425 (1067 females, 1348 males) were never married. They were from joint (2824) and nuclear (1783) families. Since, most of the respondents were from nuclear families or basically from joint family were presently residing as nuclear family; family type has been included in the final analysis. Household income of the respondents ranges between <5000 to 30 thousands rupees, who live in rural (4110) and urban (497) areas. In terms of caste, 1125 were scheduled caste, and 224 were scheduled tribes. Among them 345 respondents have education less than 5th, 665 had obtained education below matric, 1826 were undergraduates, 945 were graduates and 826 had education above graduation level. In the different age groups, 641 were in <20 age group, 1233 were in 20-30 age group, 1064 were in 30-40 year age group and 841 were part of 40-50 years age group while 828 constitutes the respondents having age above 50 years.

On the basis of the experience and observation of the researchers, it can be said that females were more responsible than males especially in the age of <20 years and 20-30 years. They have shown keen interest in filling the questionnaire or providing verbal responses. They have shown serious concerns with the research topic. On the basis of data analysis in the preceding chapter, the following findings can be safely outlined:

In all, 75.61% respondents have heard about HIV/AIDS and 24.39% of the total respondents have not heard about HIV/AIDS. All respondents in urban area have heard about and later group belongs to rural area. Among these 24.39% respondents, 9.81% belongs to SC category, therefore, scheduled caste people living in rural area needs specific attention. In terms of age, they are present in all age groups. It is noticeable that with the increase in age, the number of people having negative responses also increases. Gender-wise 15.43% females and 8.96% males have not heard about HIV/AIDS. The ratio is 1.1.72 which implies that females are but behind almost 2 times than males. They have education upto matric or below matric. Thus, education level of respondents in positively connected awareness about HIV/AIDS. This is significant to notice that 13.58% of ever married and 10.80% of never married are part of this group. They all belong to the households having income less than 10 thousands per month.

In terms of ratio, against the total sample of 641 in <20 age group 623 (97.91%) have heard about it. Similarly, in the next age group of 20-30 years, this is 80.69% while in 30-40 years age group this is 94.49%. In the other age group of 40-50 years, this ratio is 73.32% and in above 50 years age group this is 67.64%. It is significant to notice that on an average in 15-49 years age group 86.60% have heard about HIV/AIDS. Further, against the total female population 2291 in the

sample. 69.00% have heard about HIV, while in the males this ratio comes to 82.16%. Among the ever married group 1556(71.31%) have heard about HIV/AIDS and in the never married group this is 81.93%.

Out of all respondents, 33.47% respondents know the meaning of HIV/AIDS. Out of them (8.72%) were not able to differentiate between HIV and AIDS, however, they clearly understand that HIV causes AIDS. Among them 18.92% are females and 14.54% are males, whose educational level varies between matriculation and above. They belong to rural (25.11%) and urban (8.35%) areas. This is significant to note that even in the urban population (2.43%) have no clear knowledge on this aspect. They are present in all age groups having no significant trends. This significant to note that among them 20.44% are never married and 10.85% are ever married. Among the females 38.06% know about it, while in males this percentage comes to 28.92%. Against the 74.66% urban population only 28.15% rural sample know the exact meaning of HIV and AIDS.

The respondent who have heard about HIV i.e. 75.61% respondents know that HIV and AIDS harms human body and causes many diseases but only 17.73% have provided details about the ways in which HIV affects human body. In the later groups fall 10.54% males and 7.18% females who belong to the household having income above 10 thousands per month. Their marital status varies from ever married 6.44% and never married 11.28% respondents. They live in rural (13.06%) and urban (4.66%) areas. In terms of age, more than 58% of those who know the ways in which HIV affects human body is between 20-30 years. This is also noticeable that this knowledge is negligible among the respondents in age above 50 years.

Out of total 4607 respondents, 75.61% were able to tell that HIV spreads through unsafe sex with infected male or female. Among these, 37.63% added three more reasons i.e. saliva, infected blood and mother-to-child spread of virus. A few other added male having sex with male as one of the reason also. They belong to 20-40 years age group. They have acquired education above matric level, who belong to rural area 31.79% and urban area 5.83%. This group comprises 19.29% females and 18.34% females. Among these 17.71% were even married and 19.92% were never married.

In the rural sample 35.64% were able to tell reasons while this percentage in urban area is 51.12%.

In all 37.63% respondents were able to tell that the HIV may transmit from infected mother to her child. On persuasion, 824 i.e. 17.88% also estimated that this is possible. A few respondents also described the chances of getting HIV infection by a child in the order of their birth. Among these, 29.12% were females, 26.39% were males who belongs to rural area 49.96% and urban area (5.55%). Their educational level is above matric and income range is above 5 thousands. It is noticeable that the age of 39.30% respondents are between 20-40 years, which is more than 75% of the total respondents knowing about mother-to-child transmission.

Among all respondents, 84.93% respondents reported to have noticed/seen 'red-ribbon'. All of the respondents in the urban area reported to have seen it. Those who have not seen 'red-ribbon' i.e. 15.06% belongs to rural area. Out of these 84.63%, 48.12% were able to tell its association with HIV/AIDS, while remaining 51.87% were not able to tell this association categorically but a few estimated that this is a possible association. The noticeable trend is that the respondents in the lower age groups i.e. <20 and 20-30 years have lesser ratio than the respondents in the other age groups. On account of marital status, 43.95% are never married and 43.15% are ever married, whose income ranges above ten thousand rupees per month. On educational level, 76.12% have been to school above 10th standard but 8.81% were having education below matric standard.

The data indicates that 75.61% respondents which includes 64.81% from rural area and 10.78% from urban area know that it is possible to diagnose HIV. They all were aware that such facilities are available in the State. Among the urban area respondents, categorical information about hospital is available but among the rural 18.40% respondents have no such specific knowledge. Gender-wise 42.00% are females and 34.29% are males, whose marital status varies from never married (41.08%) and ever married (34.15%). Their educational level is above matric and they come from all income groups. The lower age groups <20 to 20-30 years have numerical lead over other age groups. Even those 24.39%

respondents, who have not heard about HIV were aware of health facilities available in the State for all diseases and have positive attitude towards them.

Only 35.77% respondents have knowledge about ICTC van who belong to rural area (29.25%) and urban area (6.51%). It is noticeable that even among the urban area respondents 4.21% persons still not has knowledge about ICTC van while this percentage is 14.6% in the rural sample. Among these 18.42% are females and 17.34% are males who belongs to families having income below 5 thousand per months. This group constitutes 19.79% never married and 15.97% ever married respondents. In addition, 18.34% also know that in such a van medical facilities are provided.

The data provides that 11.13% respondent know about ART as medical treatment for prevention of HIV/AIDS, whose education level is graduation or above. Among them, 4.92% are males and 2.36% are females. 2.43% are residing in urban area while are residing in urban area while 9.20% are part of rural area. It can be seen that not even 50% of urban area respondents know about it. This may be due to the fact that this term is not mostly used.

Only 18.36% respondents (13.54% rural, 4.81% urban) have ever talked about HIV/AIDS with their family members, while 85.97% replied negatively. The later section also includes those 24.39% who have never heard about HIV/AIDS. This implies that 61.58% of respondents did not talk about it with their family members despite knowing that such disease exist. The main reason offered for this is hesitation as this is connected with sexual behaviour in the first instance. Out of total urban sample, 44.66% have talked about it, while in the rural group this is 15.99%. Among the 18.36% respondents, 11.59% are females in the age group of 20-50 years and remaining 6.77% are males. Therefore, females are more affirmative and active than males on this issue.

Going beyond, 36.81% reported to have talked about HIV/AIDS with friends, who belongs to rural area (30.23%) and urban area (6.57%). Among them 15.51% are females and 14.71% are males, who are never married (15.53%) and ever married (14.78%). They all have education above matric and their household income is above 10 thousands. All respondents were of the view that like any other disease a person can correct his behaviour which would go a long to in prevention of HIV. Even those who have not heard about HIV, also held that it is in the hands of human beings to prevent a disease.

In all, 35.53% respondents (5.27% urban, 28.26% rural) find it non problematic to share room, food, clothes and kitchen with people living with HIV/AIDS, while remaining respondents used to think reverse of it. In the rural area respondents, with the scientific knowledge about the spread of disease, humanitarian concerns have been shown but in the urban sample the humanitarian concerns are absent. All respondents reported that everyone should take HIV test voluntarily. Some of them also wanted it to be compulsory for all people especially young people. They also held that spatial distance from hospital or non-availability of hospital nearby is a cause for individual not-opting for voluntary HIV testing.

It gathered from the data analysis that 75.61% respondents have gained information and knowledge about HIV/AIDS through news papers, magazine, hoarding, panels, radio television, internet, nukkad, campaigns, family members, relative, health workers besides doctors. 28.23% got it from nukkads, campaigns, hoarding and newspapers, 23.24% it was combination of all forms of mass-media while for 20.49% preferred mode was radio, television and internet. They notice information related to HIV/AIDS, 1-3 times (33.60%) and less than one time a day 41.02%. 75.84% of them were of the view that the purpose of spreading information about HIV/AIDS is for prevention of HIV and bring behaviour change among them.

It has been gathered from the data that 20.27% rated the availability and accessibility of information related to HIV as 'very good' but of 24.65% it was 'good' and for other 23.18% it was 'neither good nor poor'. It may be said that 44.92% respondents the IEC performance was upto the mark, while 23.18% have not adverse opinion about it. This means that total 68.10% respondents did not have any negative opinion about it. In the total sample 24.39% have not heard about HIV/AIDS, and only 75.61% respondents have responded to this question, it is significant to note that only 7.51% have negative opinion about the IEC performance.

Going further, for 11.20% respondents the IEC activities carried out in the last 5 years were highly successful and for 37.66% it was somewhat successful. But 25.76% respondents thought that it was neither successful nor unsuccessful. Collectively, it may be said that 48.86% consider it successful, while 25.76% have no negative opinion about it. In totality, 74.61% respondents have no doubt in the successfulness of IEC activities but only 1% respondents have negative opinion about successfulness of these activities. On the issue of their satisfaction about the IEC activities, no respondents was highly satisfied but 31.95% were somewhat satisfied and other 43.65% consider them as neither satisfied nor satisfied. In totality, 75.60% are satisfied lot and none is dissatisfied.

Given the question about adequacy of IEC activities, 34.55% feels that these are some adequate and for 21.59% it was neither adequate nor inadequate but for 896 (19.44%) it was somewhat inadequate. The last group of respondents argued that it should have reached to families and all section of society immediately. They appreciated the reach towards the high risk group but they also wanted reach to general masses. In all 42.26% respondents rated IEC activities as 'good' while remaining 33.34% assessed these as neither good nor poor. This implies that none of respondents have negative opinion about IEC performance of the HPSACS. Out of 75.61% respondents, 69.93% consider it possible that the HIV epidemic can be reversed in the State in view of the present efforts being taken on this issue but 5.66% estimated that it is bit tough in view of the present health facilities and difficult geographical condition of the State.

Towards conclusion, it may be said that the foregoing findings provide but a glimpse of existing knowledge and attitudes of the 15-50 years and above population about the HIV/AIDS and indicates the impact level of IEC activities. These findings pave way for certain conclusions.

The first and foremost conclusion is that that females, especially, in age group between 18-30 years are very vocal on the issue concerning their health and social standing. Their enthusiasm for providing responses and their serious to show concerns for this research was encouraging. Even on the t-test the difference in males and females in visible. The females has significantly more knowledgeable and having positive attitudes towards HIV/AIDS related issues than males. This is primarily the result of their education, IEC activities and in the environment they are living. It may be seen that nearly in all questions about knowledge females have numerical lead over males. Therefore, being a patriarchal society, the males in all age groups needs to be given special attention.

Secondly, the lower caste groups of the society coupled with low income residing in rural areas needs specific attention as 9.81% respondents of this group has yet not heard about HIV/AIDS. This constitutes 39.47% of the total scheduled caste sample taken in the study. Females in such groups deserves focus being doubly disadvantaged i.e. being female, being in low income lower caste family. The scheduled tribes in lower age groups have shown good knowledge in both male and female groups, however, in high age groups, the low level knowledge and inflexible attitudes towards HIV/AIDS and people living with HIV/AIDS continues in age groups especially above 50 years.

Thirdly, 75.61% of respondents heard about HIV/AIDS, who know that HIV/AIDS is a disease and causes many diseases in human body. They also know that this is spread through unsafe sex/unprotect sex and it is possible to diagnose HIV infected patient and treat him because such facilities are available in the State. 37.63% know the routes of transmission of HIV plus 17.88% estimated mother-to-child HIV transmission is possible. Therefore, next to unsafe sex (75.61%), mother-to-child infection is known to 55.51% respondents. Further, 33.47% respondents know the exact meaning of HIV/AIDS.

Fourthly, 84.93% including those who have not heard about HIV/AIDS, have seen/noticed 'red-ribbon' but only 48.12% were able to tell its association with HIV/AIDS. Further, 35.77% respondents have knowledge about ICTC van and its functioning but only 11.13% respondent know about ART. This may be due to the reason that the people may not go for understanding scientific/medical science terms but they know that treatment of HIV/AIDS is available in the State hospitals.

Fifthly, only 18.36% respondents have ever talked about HIV/AIDS with their family members. The main reason offered for this is hesitation on account of HIV/AIDS association with sexual behaviour. Quite contrary, 36.81% have

reported to have talked about HIV/AIDS with their friends. It is noticeable that in the former group females are in almost double ratio than males, as such, in families, females are more affirmative and active than males on this issue. 35.53% respondents find it non-problematic to share room, food, clothes etc with people living with HIV/AIDS. This response is based on mix of humanitarian interest and scientific knowledge about the spread of this disease.

At sixth place, it is found that nukkad, campaigns, hoarding, newspapers are most accessed modes of getting information about HIV/AIDS. They all understand that the purpose of spreading such information is for prevention of HIV and to bring behaviour change among general masses. Out of 75.61% respondents, 51.47% respondents got information from these modes, while 20.49% got the same from electronic media i.e. radio, television and internet. Only 33.60% notice/get such information 1 to 2 times a day from all these sources of information.

Seventhly, for 68.10% respondents the availability and accessibility of information about HIV/AIDS is upto mark and only 7.51% gave negative response. Their negative response is owing to the reasons that such facilities are not readily available. In all, 74.61% have no doubt in successfulness of IEC activities, while remaining about 1% feel that general masses are still to be made aware for complete success. On satisfaction level, 75.61% are satisfied lot and non is dissatisfied with the IEC performance in the last five years. 56.14% respondent finds the IEC activities adequate but 19.44% found some inadequacy, who argued that it should have been reached to families and all section of society. They appreciated the reach to the high risk group but also wanted IEC to reach general masses with the same impetus. 75.50% rated the IEC activities good and none has negative opinion about it.

At eighth place, 69.93% respondents on the basis of their knowledge considered it possible that the HIV epidemic can be reversed in the State in view of the present efforts being taken in this direction by the State Government, but 5.66% have negative opinion about it. They feel that it is tough in view of present health facilities, awareness, and difficult geographical condition of the State, while 24.39% have no opinion about it as they have not heard about HIV/AIDS.

Finally, the spatial dimension refers to the geographic pattern of HIV prevalence rates in specific time and space. It has been found that the district having smaller areas are more hit by HIV positivity than the districts having greater areas. In this segments, out of 12 districts, Hamirpur, Bilaspur, Una, Solan, Mandi, Shimla and Kangra have positive co-relation of HIV positivity and total area. Among these, first four districts viz. Hamirpur, Bilaspur, Una and Solan are more hit than the later three. The co-relation of total population of districts and HIV positivity indicates with the increase in population, HIV positivity increases in Hamirpur, Bilaspur, Una and Solan districts. Further, it is found that on this account, Hamirpur, Una, Bilaspur and Kangra districts are more prone to HIV positivity than Shimla, Solan and Mandi district, which in turn are more prone than Kullu, Chamba, Simla, Kinnaur and Lahaul-Spiti districts. It is noticeable that Hamirpur, Bilaspur, Una, Solan have less area but high population density and sex ratio as compared to other districts and these too have shown high HIV positivity. Therefore, spatial factor are important to the extent that Hamirpur, Bilaspur, Una, Solan, Mandi, Shimla and Kangra are need to be given priority than others. The prevalence differentiation for overall HIV positivity is 62 (787-725) for the period 2011-2013 and for AIDS is 93 (529-436). Therefore, a decrease in overall HIV positivity with spatial variations in the State can be noticed.

To sum up, it may be concluded that Himachal Pradesh being a traditional society in transition and knowledge about HIV/AIDS have increased specifically in the lower age groups (20-30 years) and females, who have become vocal about the issues related to their health. Rural-urban and male-female divide is discernable which needs to be given special attention. The impact of IEC activities is significant in 15-49 years age groups and age, education and income are more important variables.

Besides, among general masses there exists positive attitudes towards people living with HIV/AIDS and health facilities provided by the Government in general and medical treatment of HIV/AIDS patient in particular. The IEC need to focus of local sensitivities, cultural considerations and special measures need to be taken for lessening the hesitation in discussing the HIV/AIDS and health related issues among general population, especially the low income, downtrodden, low educated population.

Significance of the Study

This study is significant, primarily, in three ways. One is the nature of the study as this study has assessed the impact of the IEC activities run across the State but has also looked into the spatial and social-psychological factors posing hindrance for HIV intervention and prevention programmes. Secondly, the time of conducting this study is important. This is the time period when the prevalence rate of HIV/AIDS in the State is somewhat stabilised. With the enhanced medical facilities and behaviour mainstreaming activities efforts are on the direction of reversal of this epidemic. At third place, quantitative and qualitative techniques have been used in combination to gather data in order to go deep in understanding the attitudinal inclination, knowledge and belief system of the respondents in general population.

Limitations of the Study

This study cannot be said to be free of limitation. The genesis of the study lies in the genesis of the study and in area in which any study is carried out. This study is quantitative but also being qualitatively simultaneously; this study may revoke the problem of data validation and other such problems springing there from. It may also be that without using non-projective techniques for assessment of unconscious attitudes, which affects the response to certain extent or result in modified response. However, to reduce such effects, it has been tried to get vivid opinion.

While the quantitative data is essentially put to statistical analysis directly, the contents of which the respondents narrated to the interviewers or written themselves cannot be termed as flawless, however, while presenting data it has been taken care that their original contents be retained. Further, to talk about HIV/AIDS and disease is difficult unless the person is under medically ill or need treatment. The conservatism prevalent in the society was also hindrances for gathering data but with the involvement of intermediaries it has been tried to get clear and categorical information from the respondents. Despite all this, the comfort of the respondents, which was encouraging sometimes, was apparent in their spontaneous sharing of their knowledge and experiences.

There may be many other factors limiting the scope of this study result for generalisation but this study certainly provides insight into the knowledge, attitudes and belief system of people living in Himachal Pradesh towards HIV/AIDS. In addition, it also shed light on the people's attitudes towards overall IEC activities including social-psychological and spatial factors resisting the desired outcome of IEC activities and the achieved impact among the general masses.

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