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Evaluating HIV/AIDS Knowledge and Awareness Dynamics: Insights from Adult Populations in India

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Abstract:-

- ***Background:***

HIV/AIDS has been one of the world's most serious health and development challenges. There is no definitive cure for HIV infection yet, but Anti-Retroviral Therapy (ART) helps in controlling the progression of disease. Increasing access to HIV prevention, diagnosis, treatment, and care has enabled people living with HIV to lead a long and healthy life. This study aimed to assess the knowledge and awareness of the adult population.

- ***Aims and Objectives:***

To analyze the progress in the knowledge and awareness of HIV/AIDS, to compare literacy rate with knowledge and to witness the progress of 95-95-95 target amongadults (15-49 years of age) in India.

- ***Materials and Methods:***

The study used a narrative description, with NFHS fact sheets (NFHS-3,4&5) India collected from credible sources. In the analysis four indicators were studied i.e., women and men who have comprehensive knowledge of HIV/AIDS, women and men who know that consistent condom use can reduce the chance of getting HIV/AIDS.

- ***Results*:**

The awareness in the women has been increased to 13.5% between NFHS 4 and NFHS 5 as compared to men where a minimal improvement of 4.6% was seen. In terms of cumulative indicators, there was an improvement of 4.1% at country level. Increase in knowledge and awareness in NFHS-5 compared to NFHS-4 was seen highest in Lakshadweepwith a change of 31.9% and highest decline was observed in Punjab by 20.2%.

- ***Conclusion:***

Knowledge and awareness of HIV/AIDS is very scarce in most part of India. This indicates we are still quite far in achieving the goal of 95-95-95 target. It is essential to improveknowledge and awareness regarding HIV/AIDS among individuals, to bridge the gap of misconception and discrimination.

Keywords:- *HIV/AIDS Awareness, NFHS 5, National Family Health Survey 5, 95-95-95 Target, Prevalence, Prevention, Anti-Retroviral Therapy.*

I. INTRODUCTION

Human Immunodeficiency virus leads to one of the most vulnerable diseases known as Acquired Immunodeficiency Syndrome. In initial phase, the person might be asymptomatic ormight experience influenza-like illness for a brief period, which is usually followed by prolonged duration of asymptomatic incubation period. This infection compromises immune system, making the individual prone to various opportunistic infections such as tuberculosis, tumours and fungal infections, occurrence of which is otherwise very rare. In later stages, the infection is established and is associated with weight loss, during this stage it is referred as Acquired Immunodeficiency Syndrome (AIDS)(1).

Unprotected vaginal or anal intercourse, transfusion of contaminated blood or body fluids, and exchange of contaminated needles, syringes, surgical equipment, or other sharp devices are thefour main routes of transmission. Also, during pregnancy, childbirth, and breastfeeding, it can also be passed from a woman to her child. [2]

World Health Organization reported HIV as one of the most serious health challenges, which has claimed the lives of 27.2–47.8 million (36.3 million) people till date. By the end of 2020, there were an estimated 30.2–45.1 million (37.7 million) people living with HIV. In 2020, it was estimated that 6,80,000 [4,80,000– 1.0 million] individuals would die from HIV-related causes, while 1.5 million [1.0–2.0 million] would acquire the virus.[2] Although the prevalence rate of HIV is low still India has the second highest HIV burden globally with an estimated. 23.19 lakh people living with HIV (PLHIV) in 2020.[3] Although there is no definitive cure, the disease course can be limited with anti-retroviral therapy (ART). With improved access to health care facilities and effective ways of prevention, diagnosis and treatment of the disease including opportunistic infections[2], people living with HIV are able to live healthy and prolonged lives. To bridge the gap in the health care facilities caused by COVID-19 pandemic, immediate andeffective actions are required to be taken. The

UNAIDS suggested 95-95-95 targets need to be met by levelling up the attempts to increase the awareness and knowledge about HIV/AIDS and improving the public health response to HIV.[2]

For National AIDS control program, National Strategic Plan for HIV/ AIDS and STIs, a blueprint has been prepared for an AIDS free India and the target is set between 2017-2024. Itis a three zeros strategic program which includes zero infections, zero AIDS related deaths andzero discrimination. Through this plan an ambitious approach to end AIDS by 2030 has been set on NACP. [4]

Knowledge of HIV/ AIDS regarding sexual behavior is of mentionable interest as they can contribute to high-risk behavior, as for young individual the duration between marriage and sexual initiation is the time for experimentation. Due to lack of knowledge and awareness, thereis higher risk of sexually transmitted infections like HIV in sexually active youths. Knowledge and beliefs among the general population, also affects the social and mental well-being of people living with HIV/AIDS. [5] Hence, focus of various policies and programmes conducted by the Government should focus to bridge this gap of knowledge.

The prevalence of people living with HIV/AIDS has decreased overtime, but still there lies a huge gap of basic knowledge on the disease, misconceptions along with stigma and discrimination. To analyze the underlying cause for this gap, it is essential to understand the knowledge and awareness among the individuals. Hence, we focused to analyze the change in trends of knowledge and awareness in men and women using the National Family Health Survey (NFHS) data.

II. METHODOLOGY

NFHS is a multi- phase, large-scale survey conducted in a representative sample of householdsthroughout India. Each successive round of the NFHS has had two specific goals: to provide essential data on health and family welfare needed by the MOHFW and other agencies for policy and programme purposes, and to provide information on important emerging health and family welfare issues. The MOHFW, GoI, designated the International Institute for Population Sciences (IIPS), Mumbai, as the nodal agency, responsible for providing coordination and technical guidance for the survey[8]. NFHS factsheets give us information regarding the trends on various key indicators.

The fieldwork for NFHS-5 survey was done in two phases. The first phase was conducted from17th June 2019 to 30th January 2020 and the second phase from 2nd January 2020 to 30th April 2021 by 17 field agencies who gathered information from 6,39,699 households and 7,24,115 women. Computer-assisted personal interviewing (CAPI) was used to carry- out surveys in local languages on a mini- notebook. Scientific Sampling of households was done from the listof each cluster to be surveyed. Uniform sample-design, field procedures and questionnaires which were translated into 18 regional languages were used in the survey. All these surveys were cross- sectional in nature and were conducted in a selected sample of households throughout the country.

Change in comprehensive knowledge and awareness and of HIV/AIDS mentioned using the data of NFHS 1 (1992-1993), NFHS 2 (1998-1999), NFHS 3 (2005-2006), NFHS 4 (2015-2016).

In the analysis four indicators were studied i.e., women and men who have comprehensive knowledge of HIV/AIDS (%), women and men who know that consistent condom use can reduce the chance of getting HIV/AIDS (%).

III. RESULTS

As depicted in Figure 1, the awareness among men who knew that consistent use of condom improved by 4.5% in NFHS-5 (82%) compared to NFHS-4 (77.4%), in contrast to increase of7.5% (NFHS-4) compared to NFHS-3 (70%). In women, the improvement in awareness was by 13.5% in NFHS-5 (68.4%), compared to an earlier increase of 18.6% in NFHS-4 (36.3%) from NFHS-3 (54.9%).

The comprehensive knowledge of HIV/AIDS in men showed a decline of 2.3% in NFHS-5 (30.7%) compared to NFHS-3 (33%), in contrast to knowledge in female, where there was anincrease of 4.3% in NFHS-5 (21.6%) compared to NFHS-3(17.3%).

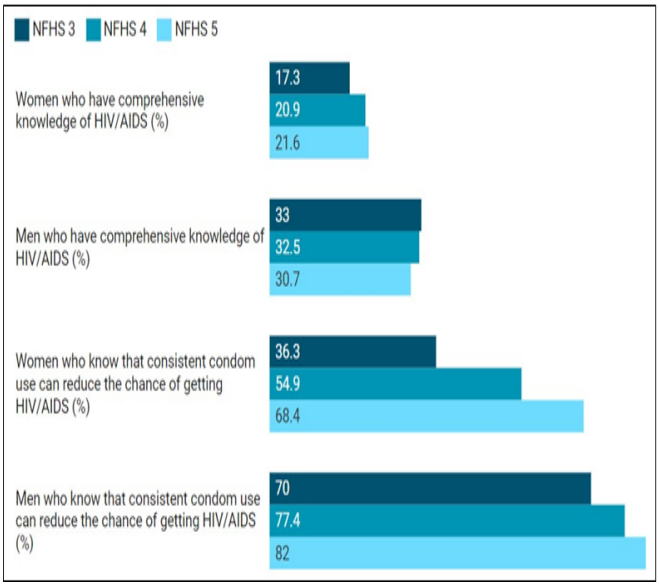

Fig 1 Comparison in Knowledge and Awareness about HIV/AIDS between NFHS 3, NFHS-4 & NFHS-5

Figure 2 depicts that comprehensive knowledge in NFHS 4 was comparatively 4.9% more in urban areas (28%) than rural areas (23.1%) and awareness was 14.1% higher in urban areas (75.2%) compared to rural areas (60.9%). Similar results were observed in NFHS-5, where the knowledge and awareness in urban areas was higher compared to rural areas by 10.4% and 9.1% respectively.

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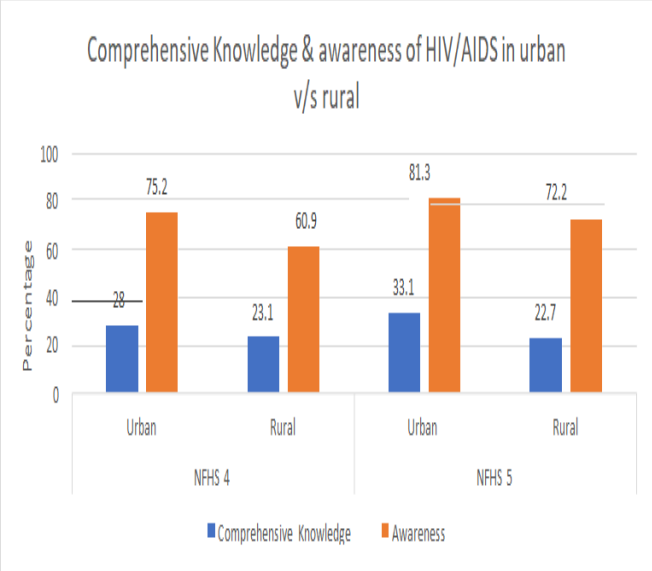

Fig 2 Comparison of Comprehensive Knowledge & Awareness of HIV/AIDS betweenUrban and Rural Areas

Comparison of knowledge and awareness about HIV/AIDS between NFHS-4 and NFHS-5, in terms of cumulative indicators showed that there was an improvement of 4.1% at country level. State-wise increase in knowledge and awareness in NFHS-5 compared to NFHS-4 as depicted in Figure 3, was highest in Lakshadweep with a change of 31.9% (38.9% to 70.8%), followed by Dadra and Nagar Haveli & Daman and Diu (18.9%), Karnataka (16.62%) and Goa(15.32%). Few States and Union Territories showed decline in knowledge and awareness in NFHS-5 compared to NFHS-4. Highest decline was observed in Punjab by 20.2% (73.4% to53.2%), followed by Chandigarh (14.2%), Haryana (5.9%) and Andaman and Nicobar (4.5%).

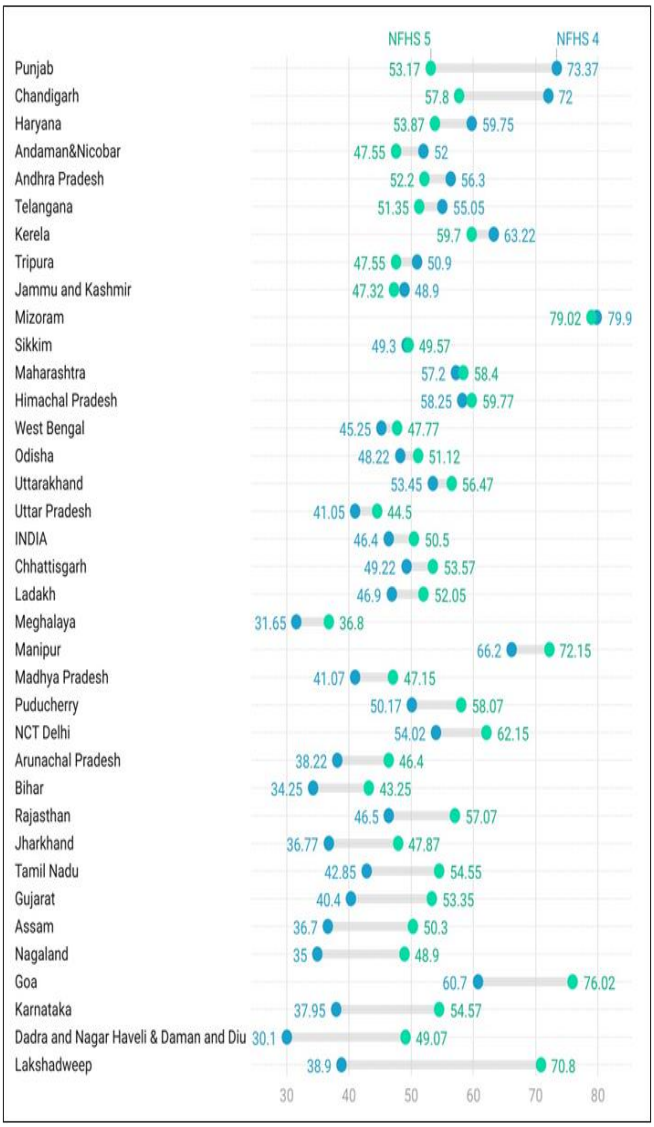

Fig 3 State-Wise Change in Knowledge and Awareness in HIV/AIDS between NFHS-4and NFHS-5

As depicted in Figure 4, literacy rate is shown to improve from the time of NFHS-3 to NFHS-5. Despite literacy rate has improved to about 15% in 2020 (77.7%) compared to 62.75% in 2005, the comprehensive knowledge of HIV/AIDS showed very negligible increase of about 1%.

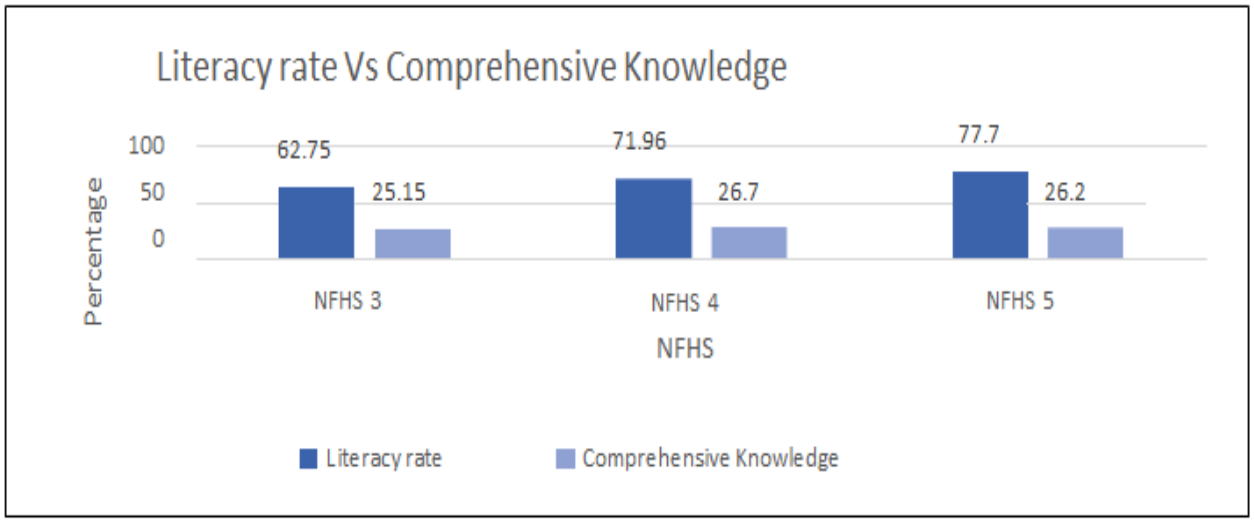

Fig 4 Comparison of Literacy Rate with Comprehensive Knowledge of HIV/ AIDS

IV. DISCUSSION

The comprehensive knowledge of HIV/AIDS among women showed a very slight improvement of about 4.3% in NFHS-5 compared to NFHS-3, while in men there was a declinein this value by 2.3%. This lack of improvement was stated to be due to paucity of funds along with change in mechanism in the way the IEC strategy was implicated, hence creating challenges that included new technologies to be tapped on, need for assessment with proper evaluation and monitoring, lack of coordination, innovative activities under youth interventionand intersectoral collaboration. [7]

State- wise comparison showed that comprehensive knowledge and awareness was highest in Mizoram (79%) followed by Goa (76%), Manipur (72.2%) and Lakshadweep (70.8%), while it was least in Meghalaya (36.8%) followed by Bihar (43.3%), Uttar Pradesh (44.5%) and Jammu & Kashmir (47.3%). Lakshadweep showed highest improvement (31.9%), followed by Karnataka by 16.6%), while highest decline in Punjab (20.2%), followed by Chandigarh (14.2%). These variations among states and Union Territories can be due to the strategies implemented through State/ UT AIDS Control Societies (SACS). It is essential to take immediate actions to bridge the gaps of knowledge and awareness by strengthening the behavior change communication strategies and monitoring the changes through strict surveillance programs.

When comprehensive knowledge and awareness was compared between urban and rural areas, it was observed in both NFHS-4 and NFHS-5 that urban areas had more knowledge and awareness of HIV/AIDS compared to rural areas. This was true for most of the states except Goa, Jammu and Kashmir, Lakshadweep, Kerala and Nagaland, where men of rural regions had more comprehensive knowledge than their urban counterparts. This can be due to provision of better adolescence education and youth intervention in schools and colleges of urban India. The awareness among rural population has improved with 11.3% in NFHS-5 (72.2%) compared to NFHS-4 (60.9%). This can be after the launch of National Strategic Plan for HIV/AIDS and STI 2017- 2024., which has various strategies to achieve 95-95-95 strategy. The strategic plan includes to monitor and evaluate change in behaviour by Integrated Biological Behavioural Surveillance. [4]

When Comparing literacy rate with comprehensive knowledge of HIV/AIDS, it is seen that despite the improvement of literacy rate by 15% overtime from NFHS-3 to NFHS-5, the comprehensive knowledge has no substantial improvement. Though there is a misconception that with improvement in literacy rate would increase the knowledge about the disease, this data makes it clear that it's not true always. Without the improvement in comprehensive knowledge, it would not be possible to eliminate various misconceptions about prevention and transmission, making it difficult to eradicate stigma and discrimination. The strength of the study is that it provides comparison of comprehensive knowledge and awareness between states, urban versus rural and gender, hence providing information about areas of concern. The major limitation is that the data analyzed and presented in the study is not sufficient to provide the underlying factors affecting knowledge and awareness. Also, the study is secondary data analysis made only on the basis of NFHS factsheets, hence less reliablethan primary research.

V. CONCLUSION

According to our findings, a sizeable section of the Indian population is aware of HIV/AIDS but comprehensive knowledge is still a warning sign, indicating that we are quite far from achieving the zero stigma and zero discrimination. This lack of adequate knowledge is quite the reason for misconceptions of HIV/AIDS still being significant among the Indian community. While education is crucial in achieving the current extent of knowledge about HIV/AIDS in the community, it is also important in reaching out to vast population, making them aware of HIV/AIDS, upgrading their knowledge about the disease, and demystifying their myths and misconceptions about the disease to pave the way towards achieving ambitious goalof Ending AIDS by 2030.

RECOMMENDATIONS

- Enhance comprehensive education initiatives targeting urban and rural populations.
- Strengthen community engagement and outreach programs, involving local leaders and organizations. Utilize digital platforms for widespread dissemination of accurate information.
- Implement targeted interventions for high-risk groups.
- Improve monitoring and evaluation mechanisms. Foster collaboration among stakeholders for effective action.

➢ *Financial Support:*
None

➢ *Ethical Issues:*
As it is secondary data analysis and the data is freely available in public domain, it is exempted from ethical issues.

➢ *Conflict of Interest:*
None

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ANNEXURE

Table 1 State-Wise Average of Comprehensive Knowledge andAwareness of HIV/AIDS

States/UTs	NFHS 4 (Average valueof all indicators)	NFHS 5 (Average valueof all indicators)
INDIA	46.4	50.5
Andaman & Nicobar	52	47.55
Assam	36.7	50.3
Andhra Pradesh	56.3	52.2
Bihar	34.25	43.25
Dadra and Nagar Haveli & Damanand Diu	30.1	49.07
Goa	60.7	76.02
Gujarat	40.4	53.35
Himachal Pradesh	58.25	59.77
Jammu and Kashmir	48.9	47.32
Karnataka	37.95	54.57
Kerela	63.22	59.7
Lakshadweep	38.9	70.8
Ladakh	46.9	52.05
Maharashtra	57.2	58.4
Meghalaya	31.65	36.8
Manipur	66.2	72.15
Mizoram	79.9	79.02
Nagaland	35	48.9
Sikkim	49.3	49.57
Telangana	55.05	51.35
Tripura	50.9	47.55
West Bengal	45.25	47.77
Arunachal Pradesh	38.22	46.4
Chhattisgarh	49.22	53.57
Haryana	59.75	53.87
Jharkhand	36.77	47.87
Madhya Pradesh	41.07	47.15
Odisha	48.22	51.12
Punjab	73.37	53.17
Rajasthan	46.5	57.07
Tamil Nadu	42.85	54.55
Uttar Pradesh	41.05	44.5
Uttarakhand	53.45	56.47
Chandigarh	72	57.8
NCT Delhi	54.02	62.15
Puducherry	50.17	58.07