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Original Research Article

A Prospective Research to Analyse Various Demographic Factors among the HIV Individuals.

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Abstract

Introduction: Effectively monitoring the spread of Human Immunodeficiency Virus (HIV) within a population is essential for both prevention efforts and strategic resource allocation. A study was conducted to find the correlation between various demographic factors and HIV status around the newly formed Rajamahendrawaram district, Andhra Pradesh.

Methods: It was a prospective, a cross-sectional research conducted in the department of Physiology, GSL Medical College, Rajamahendravaram. The research was conducted from January to May 2016. Individuals of both gender aged > 18 years, those were HIV infected as per the National AIDS Control (NACO) guidelines were included in the study. Non cooperative individuals, pregnant women were not considered in the research. After this initial work, physical examination was carried and all the findings were recorded. The sociodemographic parameters such as age, gender, economic status, and so on were recorded in the study proforma. Then blood sample was collected following the universal safety precautions. HIV status was evaluated as per the NACO guidelines. Statistics such as mean, Standard deviation were used. $P < 0.05$ was considered statistically significant.

Results: Total 164 members were included in the research; gender wise, 95 (57.9%) were female and 69 (42.1%) were male. Majority (42.1%; 69) were in 31 – 40 years. Most (52%) of the study members belong to lower socio economic state it was followed by upper (28%) and middle income (20%) groups.

Conclusion: HIV prevalence is notable among males, with the most vulnerable age group being around 40 years. The infection is frequently identified within the low socioeconomic strata.

Keywords: HIV, Gender, Age, Research.

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Introduction

Effectively monitoring the spread of Human Immunodeficiency Virus (HIV) within a population is essential for both prevention efforts and strategic resource allocation. Despite more than four decades passing since the onset of the HIV epidemic, it remains a formidable challenge to global public health. [1] HIV continues to be a leading cause of mortality in sexually transmitted diseases (STDs), posing a threat to millions of lives worldwide. Incidence, serving as a pivotal indicator of the HIV transmission rate in diverse populations, is crucial for evaluating the impact of policies and programs dedicated to HIV prevention. Globally, the number of new infections has decreased by 52% since 1997, with approximately 1.5 million people newly infected with HIV in 2020. [2]

HIV infiltrates the human immune system, particularly targeting CD4 cells, crucial for combating infections. This invasion can culminate in the devastating condition known as AIDS, causing significant impairment to both cellular and humoral immunity. In the past two decades, advancements in the prevention and control of HIV/AIDS have sparked discussions about the feasibility of completely eradicating HIV/AIDS as a public health threat. The Joint United Nations Programme on HIV/AIDS (UNAIDS) has actively advocated for the objective of eliminating HIV/AIDS by 2030. [3] With this a study was conducted to find the correlation between various demographic factors and HIV status around the newly formed Rajamahendrawaram district, Andhra Pradesh.

Methods

It was a prospective, a cross-sectional research conducted in the department of Physiology, GSL Medical College, Rajamahendravaram. The research was conducted from January to May 2016. Study protocol was approved by the Institutional Ethics committee. An informed written consent was taken from the participants. Individuals of both gender aged > 18 years, those were HIV infected as per the National AIDS Control (NACO) guidelines were included in the study. [4] Non cooperative individuals, pregnant women, those already on medication were not considered in the research.

All the HIV infected individuals were considered as test group and healthy humans were categorised in the control group. After recruiting the individual in the research, the study was clearly explained and doubts were clarified. And the members were assured that the study protocol doesn't influence the health condition. The confidentiality was also maintained and the study team assured that names were not disclosed.

After this initial work, physical examination was carried and all the findings were recorded in the study proforma. In addition the sociodemographic parameters such as age, gender, economic status, educational background, occupation and so on were recorded in the study proforma. Then blood sample was collected following the universal safety precautions. [5] HIV status was evaluated as per the NACO guidelines. Manufacturer guidelines were thoroughly followed while evaluating the HIV status.

Statistical analysis: The data was analysed using SPSS software version 17. Statistics such as mean, Standard deviation, ANOVA and t test were used. P value < 0.05 was considered statistically significant.

Results

Total 164 members were included in the research; gender wise, 95 (57.9%) were female and 69 (42.1%) were male. Majority (42.1%; 69) were in 31 – 40 years and just 4.9% (8) were singles. Literacy rate was 39% (64). Most (52%) of the study members belong to lower socio economic state it was followed by upper (28%) and middle income (20%) groups.

Discussion

In India, numerous obstacles hinder the acceptance of Voluntary Counseling and HIV Testing (VCT). Cultural and social challenges persist, often overlooked and underestimated, particularly in resource-constrained nations like India. VCT clinics have primarily emerged in urban areas, emphasizing the need for broader accessibility and consideration of cultural and social factors. [6]

In this study, 58% (95) were male and the male female ratio was 1.4. With this it is clear that there is more male with HIV status. As per the reports, elevated infection rates were noted predominantly among males, although the gender gap has been gradually diminishing in recent years. Both sexes in the country have exhibited declining patterns in HIV incidence rates. Over time, age-standardized incidence rates have shown a shift, with females now experiencing higher rates compared to males. These findings align with observations in South India and South Africa, where a decrease in the incidence of HIV infection has been noted. Nevertheless, the incidence remains higher among males than females in these regions. [8, 9]

In the current study, majority (42.1%; 69) of the study members were in 31 – 40 years age group. It was followed by 21 to 30 years (47; 28.7%), 41 to 50 years (17.7%; 29). There was same number (8; 4.9%) were diagnosed in 18 to 20 years, > 60 year groups, respectively and minimum number (1.8%; 3) were diagnosed in 51 – 60. The mean age of the HIV participants in this research was 42.8 ± 4.9 years. The decrease in incidence rates among younger age groups signals the effectiveness of prevention measures as part of a national response. [10] A study based on cohorts in a South African context similarly observed a notable and early decline in HIV incidence among men compared to women. [9] Conversely, researchers believe that the younger population, given their freedom of thought, speech, and choices, is more susceptible to engaging in common risk factors associated with HIV. [11]

The socioeconomic status of the study members was divided as per the modified Kuppuswamy scale. [12] Diverse socio-economic factors play a role in influencing HIV testing. For instance, higher levels of education, employment status, and income generation have been linked to an elevated acceptance of testing, attributed to better access to HIV information and increased autonomy in deciding to undergo testing. [13] In this research, 52% of the study members belong to lower socio economic state it was followed by upper (28%) and middle income (20%) groups. Research indicates that socio-economic status (SES) can detrimentally affect individuals' well-being, particularly in environments marked by pervasive poverty and significant income disparities. [14] SES, being a multifaceted composite measure, usually encompasses social, economic, and employment dimensions. It is gauged through factors such as education, income, and occupation. [15] Literature also reported that understanding the demographic and socio-economic factors that predict HIV testing uptake is crucial for tailoring diverse approaches to different population groups. [16]

Conclusion

HIV prevalence is notable among males, with the most vulnerable age group being around 40 years. The infection is frequently identified within the low socioeconomic strata.

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