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**INDO AMERICAN JOURNAL OF
PHARMACEUTICAL SCIENCES**<http://doi.org/10.5281/zenodo.1464976>Available online at: <http://www.iajps.com>**Research Article****STUDY ON THE EMERGENCE AND EVOLUTION OF HIV IN
PAKISTAN**¹Dr. Nadeem ul Hasan, ²Dr. Saeed Anwar, ³Dr. Muhammad Ali Iftikhar¹Medical Officer at BHU Malka Haji, Nankana Sahib²Medical Officer at RHC 188, Mian Pakhi, Vehari³Nishtar Hospital, Multan**Abstract:**

Introduction: HIV/AIDS is no more a health problem; it has become a security issue as millions of people are at the verge of extinction. Around 90% of the AIDS victims are living in the developing countries where the incidence rate is aggravated by poverty, hunger, disease, lack of medical facilities, illiteracy and under-development. **Objectives of the study:** The basic aim of the study is to analyze the emergence and evolution of HIV in Pakistan. **Methodology of the study:** This study was basically conducted at Nishtar hospital Multan and hospital of Nankana Sahib during 2017 to 2018. Basically we design a questionnaire to find out the reasons and prevalence of HIV/AIDS in Pakistani nation. In this questionnaire we add some basic questions regarding HIV. **Results:** Like other Asian countries Pakistan is also HIV epidemic, characterized by different risk factors Formerly Pakistan was considered to be a low prevalence country, but now it is in the group of "Countries in Transition" with a concentrated epidemic among high risk groups, where the AIDS problem is increasing since last five years, according to the private newspaper The News and NACP NIH. **Conclusion:** This is the common thought in the minds of Pakistani people that as an Islamic Republic, Pakistan is protected from HIV/AIDS. This is true that Islam is against pre-marital sex or extra-marital sex and also homosexuality, and this is a valuable barrier against HIV/AIDS. But still there is a threat of prevalence of this disease in Pakistan.

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INTRODUCTION:

HIV/AIDS is no more a health problem; it has become a security issue as millions of people are at the verge of extinction. Around 90% of the AIDS victims are living in the developing countries where the incidence rate is aggravated by poverty, hunger, disease, lack of medical facilities, illiteracy and under-development [1].

Pakistan is an Islamic Republic in South-Central Asia, bordering the Arabian Sea. It is situated between HIV/AIDS high risk countries, India on the east, China in the north, and Afghanistan on the west. Its only low risk neighbor is Iran. The estimated population of Pakistan is 162,419,946, with an annual population growth rate of 2.03% (July 2005). The population is young, the median age being 19.44 years in males and 19.74 years in females. The age structure is a typical developing country pyramid with the 0-14 years constituting 39.6% of the population; the 15-64 years group forming the bulk i.e. 56.3% and the 65+ years comprising 4.1% of the population. Muslims comprise 97% of the population with the Christians, Hindus, and other religions comprising 3% of the population [2].

The Human Immunodeficiency Virus/ Acquired Immunodeficiency Syndrome (HIV/AIDS) is a global health problem: over 70 million people have been infected with HIV, 35 million have died and 36.7 million people currently live with the disease. HIV/AIDS is one of the most studied infection diseases with more than 260,000 papers (mentioning the topic) listed in GOPubMed and more than 42,000 papers (mentioning HIV/AIDS in the title) in the Web of Science spanning over thirty year of scientific research. HIV/AIDS is studied by a plurality of biomedical disciplines like epidemiology [3], virology, immunology or drug development and non-biomedical disciplines like social sciences and humanities. All the biomedical disciplines working on HIV/AIDS strongly rely on a solid scientific consensus, which explains the clinical manifestation of HIV/AIDS in terms of the virus interactions with the immune system cells; the behavior and

demography of the immune system cells, and, most importantly, the virus interaction with the biomolecular machinery of the host cells [4].

Background of the study

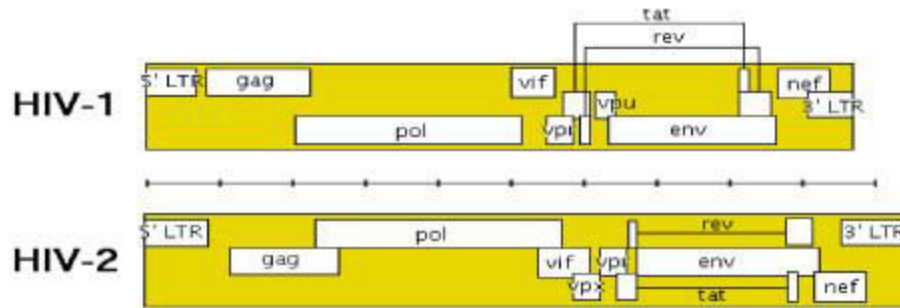
Paradigms are the keystone of research communities, for they provide a foundation for members of the community; they also define the questions, the standards, the rules and the expected results that drive research efforts. Paradigms of HIV/AIDS research are often presented in a timeline format. However, while such a historical perspective is informative, they present two disadvantages: the first is that the selection of the most relevant discoveries is arbitrary, i.e., not supported by scientometric evidence, while the second disadvantage is that the paradigms are not presented as the key elements of the organizing process of the research communities [5]. The study of the emerging research fronts offers the possibility of analyzing the relationship between the paradigms and the organizational process of the scientific communities. Research fronts can be considered as modules or clusters in a citation network of papers, i.e., sparse sub-networks of papers that exhibit dense connections [6].

Objectives of the study

The basic aim of the study is to analyze the emergence and evolution of HIV in Pakistan.

Virology and Life Cycle

The identification of HIV led the concentrated activity in the field of molecular virology. HIV is different in structure from other retroviruses. This is roughly spherical with a diameter of about 120 nm. It contains three (3) structural and six (6) genes which encodes the at least fifteen (15) viral proteins and control the ability of HIV to infect the cell. HIV is composed of two copies of positive single stranded RNA. The RNA is tightly bounded with nucleocapsid proteins and the essential enzymes for the development of virion such as; reverse transcriptase, proteases, ribonucleases and integrase [7].



METHODOLOGY OF THE STUDY:

This study was basically conducted at Nishtar hospital Multan and hospital of Nankana Sahib during 2017 to 2018. Basically we design a questionnaire to find out the reasons and prevalence of HIV/AIDS in Pakistani nation. In this questionnaire we add some basic questions regarding HIV. We want to check the knowledge related to disease and its cure in people of different age group and different mentality. All the basic information were added in this questionnaire regarding diseases and its prevalence.

The total population of Pakistan is 168.79 million at the end of 2009 with an average annual growth rate of 1.9%. In the ranking of most populated nations; Pakistan stands at 6th position in the world. Pakistan is divided into four provinces viz., Punjab, Sindh, Khyber Pkhahtunkhwa and Balochistan; two independent states of Azad Jammu Kashmir and Gilgit-Baltistan; and federal territories of Federal Administrated Tribal Area [FATA] and Islamabad. The most populated Provinces of Pakistan are Punjab and Sindh with high HIV/AIDS prevalence. The mortality rate is 64 per 100,000 live births with life expectancy at birth of 66 years. The literacy rate in Pakistan is 54% with 0.562 human development indexes and 0.537 gender development index.

Statistical Analysis

After collecting data through internet and through personal visits in different colleges, universities and other common places we analyze this data and find out these some common reasons of HIV/AIDS in Pakistan as a growing epidemic.

RESULTS:

Like other Asian countries Pakistan is also HIV epidemic, characterized by different risk factors Formerly Pakistan was considered to be a low prevalence country, but now it is in the group of "Countries in Transition" with a concentrated epidemic among high risk groups, where the AIDS problem is increasing since last five years, according to the private newspaper The News and NACP NIH. The number of infected persons might be running in millions if proper screening is carried out. The behaviors conducive to the spread of HIV infection to young people are curiosity about sex and drugs, negative peer pressure, and economic frustration in Pakistan. Widespread poverty, significant power imbalances in men and women, labor migration, lack of any system to check the HIV positive reported persons, indiscriminate transfusion of unscreened blood, rising number of drug addicts and low condom use rates, are the serious risk factors that put the country in danger of facing a rapid spread of HIV. 9% of the tested injecting drugs users (IDU's) were found to be HIV positive in 2005-2006, this percentage increased to 15.8% in 2006-2007, and it exceeded 20% in 2007-2008. 97,400 cases of HIV/AIDS were estimated in 2009 and more than 6,000 cases are registered till now (2010). Till March 2010, 3325 patients were registered at national AIDS control center NIH Islamabad. 1425 patients are on ARVS (Figure 1).

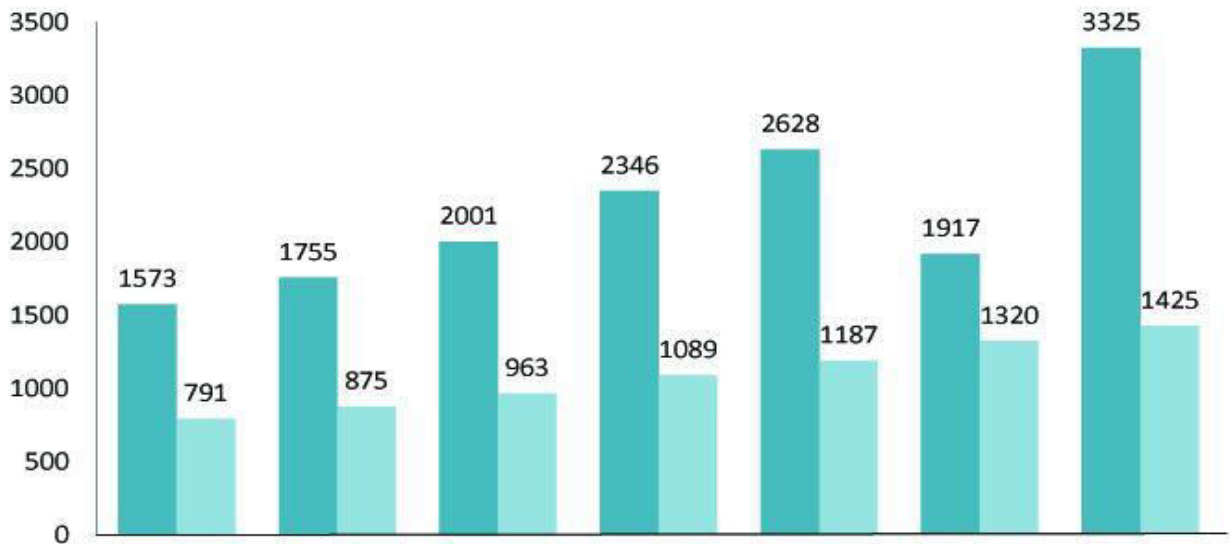


Figure 1: The number of infected and reported patients infected with HIV

The Reasons of High Vulnerability of HIV/AIDS in Pakistan

Although, HIV/AIDS prevalence appears to be low in Pakistan but there is need to establish some more accurate action plans for this. In Pakistan, the social structure and conditions include widespread poverty, significant power imbalance between men and women, low level of education, and challenges in the areas of government and human rights [8].

Poverty

Poverty is a major development concern in Pakistan, and this is also a major facilitating factor in spread of HIV. Recent documentation suggests that poverty is increasing in Pakistan, about 36 million people living below the poverty line. The poor suffer not just limitations in income; they also lack basic facilities and amenities which allow for a full and meaningful existence [9].

Gender Inequalities

It may also play a significant role in the further spread of HIV/AIDS in Pakistan. Pakistani women in general have lower socioeconomic status, less mobility and less decision-making power than Pakistani men, all of which contributes to their vulnerability to HIV. Because of gender disparities in educational enrollment, the 35% of women are literate as compared to 59% of men in Pakistan [10].

Other Reasons

Against this backdrop of poverty, gender inequalities, and low literacy rate. The general public in Pakistan is vulnerable to HIV/AIDS due to several other common behavioral patterns and risk situations. For

example, rarity of condom usage, unhygienic conditions and unsafe medical practices [11].

CONCLUSION:

This is the common thought in the minds of Pakistani people that as an Islamic Republic, Pakistan is protected from HIV/AIDS. This is true that Islam is against pre-marital sex or extra-marital sex and also homosexuality, and this is a valuable barrier against HIV/AIDS. But still there is a threat of prevalence of this disease in Pakistan.

Future recommendations

The HIV/AIDS counseling and testing is the best way to prevent this disease in Pakistan. There should be availability and accessibility of antiviral treatment so that people suffering with HIV can enjoy better life. The government of Pakistan should play their role because the successful and comprehensive HIV prevention program needs political leadership as this will be very much helpful is political personalities talk about HIV/AIDS on public places. This is eleventh hour to take measures against this disease to save future of Pakistan.

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