PSYCHOSOCIAL FACTORS RELATED TO BEHAVIOR OF DENTAL PATIENTS TOWARDS HIV/AIDS PREVENTION AT DENTAL SECTION, SANDEMAN PROVISIONAL HOSPITAL QUETTA, PAKISTAN

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A THESIS SUBMITTED IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE DEGREE OF MASTER OF PRIMARY HEALTH CARE MANAGEMENT FACULTY OF GRADUATE STUDIES MAHIDOL UNIVERSITY 2009

Thesis
entitled

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was submitted to the Faculty of Graduate Studies, Mahidol University
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ACKNOWLEDGEMENTS

I would like to thank Department of Health, Government of Baluchistan, and particularly Chief Minister Baluchistan Nawab Aslam Khan Raisani for granting me a great opportunity to undertake the MPHM course at ASEAN Institute for Health Development, Mahidol University, Thailand.

My special thanks to Professor Sirikul Isaranurug, ex-director of AIHD, for accepting my candidature for MPHM course .Also my special thanks for providing me with highly learned, helpful and knowledgeable advisor Dr. Wirat Kamsrichan and co-advisor Professor Santhat Sermsri.

I am extremely thankful to Dr. Wirat Kamsrichan and Professor Santhat Sermsri for their treasurable suggestions and precious guidance; I received from them during my thesis time. I sincerely admit that without their kind help and keenness, the completion of this thesis was not possible. I am very much thankful to them for their valuable time and adequate consultations, whenever I faced problem during my study time.

My extreme gratitude goes to Dr. Zia-Ul-Haq, Head of Department, Dental Section, Sandeman Provisional Hospital Quetta, for allowing me to collect data at department for my thesis.

My sincere appreciation to MPHM Office, resource center and Llibrary staff, for their kind and helpful support in completing this thesis in all aspects.

Finally, I am very much grateful to ALLAH for his kind blessing and my family for their moral support and prays.

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ABSTRACT

Psychosocial factors and their relation to the preventive behavior of dental patients towards HIV/AIDS were assessed in 150 randomly selected patients in the dental section of Sandeman Provisional hospital, Quetta, Pakistan. The majority of the respondents were between the ages of 18-40 (mean = 36 years).Most of them were male, Muslims and attended university. A large proportion of the respondents had a good knowledge about AIDS, its causative agent, cure and mode of transmission. However, a few misconceptions existed among respondents concerning HIV'S mode of transmission. A majority of the respondents had a perception that one can't be cured once infected with HIV and most of them had the attitude that one should be treated with sterilized instruments in dental clinics. But a considerable number of respondents were unsure about most of the questions asked regarding attitude and perception, which indicated in overall low levels of perception and attitude. Significant associations were found between knowledge, attitude and perception and preventive behavior. Most of the respondents said that the mass media, including television and newspapers, were the main source of their information about HIV/AIDS. This study shows that the majority of the respondents demonstrated low levels of preventive behavior, in spite of their high level of knowledge. This is also due to high percentage of respondents who had low levels of perception and attitude.

KEY WORDS: AIDS / KNOWLEDGE / ATTITUDES / PERCEPTION/
PREVENTIVE BEHAVIOR

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CHAPTER I
INTRODUCTION

1.1 Rationale and Justification

Acquired immune deficiency syndrome (AIDS) is a disease cause by human immunodeficiency virus (HIV) that destroys the immune system of host body leaving it an easy target for opportunistic infections. It can affect any one, at any time, at any place as it doesn't care about race, color gender, economic background and not even about age group

Till 2007, 33.2 million people lived with HIV worldwide. Sub Saharan region (Africa) worsly affected, with 22.5 million HIV positive people. 27 million have died since the first case in 1980[1].AIDS is not just a health problem but also a social problem, considered as a stigma in various cultures around the world.

According to UNAIDS estimates, about 90,000 people, or 0.1 percent of the adult population in Pakistan, are infected with HIV. Officially reported cases are, however, much lower. As of September 2004, only some 300 cases AIDS and 2,300 cases of HIV infection were reported to the National AIDS Control Program. As in many countries, underreporting is due mainly to the social stigma attached to the infection, limited surveillance and voluntary counseling and testing systems, as well as the lack of knowledge among the general population and health practitioners. Although overall HIV prevalence is low in Pakistan, there is growing evidence of substantial high risk groups which could contribute to local concentrated epidemics.

According to UNAIDS, Pakistan's HIV/AIDS epidemic is concentrated among specific populations, including injection drug users. Although Pakistan previously had been identified as having a low HIV/AIDS prevalence, a recent UNAIDS report said that almost 40% of new HIV cases in the country occur among women, who currently represent 30% of HIV-positive adults in Asia. In addition, UNAIDS data showed that the most common modes of HIV/AIDS transmission in

Pakistan are heterosexual sex and contaminated blood as well as contaminated instruments.

There is no drug yet to cure HIV/AIDS, but by appropriate level of education and knowledge the spread of this disease can be lowered. Preventive education is being promoted in many countries to make people aware of this disease and its causative factors.

One of the major causes of HIV/AIDS spread is use of poorly or unsterilized instruments in most of Pakistan health care setup. About 100 to 150 patients daily attend maxillofacial department dental section, sandeman provisional hospital, Quetta, Baluchistan, Pakistan. Patients are approximately halfway divided into urban and rural areas of Baluchistan. Sterilization conditions in this hospital are not that much satisfactory, it is inevitable to access that how much these patients are concerned about sterilization in relation to serious diseases like AIDS. If people are not found to be concerned, then what would be the apparent reasons? Assessing the level of knowledge, attitude and perception towards HIVAIDS would help to understand their preventive behavior.

Most of previous studies have been done on perception and its relation to sexual behavior of people. This study will focus particularly, the preventive behavior of dental patients and their perception and attitude in relation to dental treatment risk. This would be the first study which will help to determine the preventive behavior of dental patients towards AIDS in province Baluchistan.

I hope my this study will assist in understanding the importance of this issue and would help the policy makers and public health personals to prevent and reduce risk of HIV/AIDS transmission.

1.2 Research Questions

How psychosocial factors influence the preventive behavior among dental patients towards HIV/AIDS?

1.3 Research Objectives

1.3.1 General objective

To identify the level of preventive behavior towards HIV/AIDS risk among dental patients at OPD dental section, sandeman provisional hospital Quetta, Pakistan.

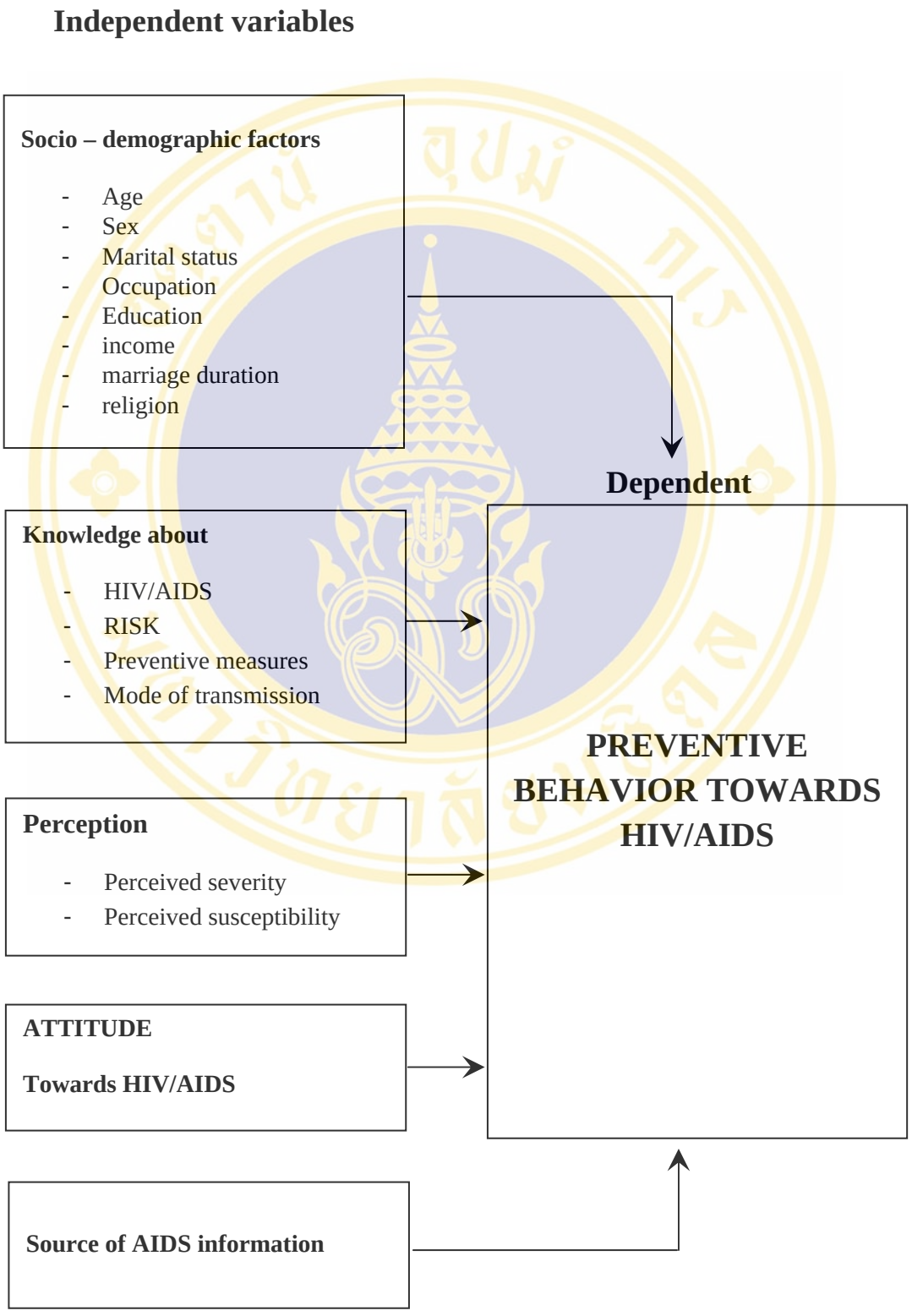
1.3.2 Specific objectives

1. To examine the socio-demographic characteristics of dental patients.
2. To study the knowledge about HIV/AIDS among dental patients.
3. To reveal the perception values towards HIV/AIDS among dental patients.
4. To examine the attitude of dental patients towards HIV/AIDS.
5. To identify the magnitude of preventive behavior towards HIV/AIDS among dental patients.
6. To examine the relationship between preventive behavior and psychosocial factors.

1.4 Research Hypothesis

1. The Socio-demographic factors are associated with behavior towards HIV/AIDS prevention.
2. There is effect of perception on HIV/AIDS preventive behavior.
3. There is influence of attitude on HIV/AIDS preventive behavior.
4. There is an association between knowledge and preventive behavior towards HIV/AIDS.
5. Source of information can influence preventive behavior towards HIV/AIDS.

1.5 Conceptual Framework



1.6 Operational Definition

1.6.1 Knowledge

The psychological perception, learning and reasoning of dental patients towards

- Transmission mode of HIV/AIDS
- Risk
- Causes
- Preventive measures

1.6.2 Attitude

It is a study which involves the beliefs, feelings, values and dispositions of dental patients to act in certain ways toward HIV/AIDS.

1.6.3 Perception

It's the study that how dental patients perceive the risk of HIV/AIDS in terms of severity and susceptibility.

1.6.4 Socio-demographic factors

The study of social status of dental patients in terms of age, sex, marital status, occupation, education, income, religion and its relation to their HIV/AIDS risk behavior.

1.6.5 Preventive behavior

It's the study, that how dental Patients physically act in certain ways to prevent themselves from being at HIV/AIDS risk.

1.7 Limitation of the study

Due to conservative cultural and social values in province Baluchistan, it is difficult to ask some straight forward questions regarding their sexual behavior.

CHAPTER II
LITERATURE REVIEW

2.1 Attitude and Behavior

Attitude is believed to be predictive of behavior.. Evidence suggests that attitude have been remained influential on adoption of health related behaviors, like: avoid smoking, screening for breast cancer and use of condoms. So if someone shows positive attitude towards hospital service, there is greater chance of that person to use that service. Similarly, if one is dissatisfied with government hospital facilities, then he would highly likely to use private health care services.

“I like eating fast food” , “breast self-exam is a waste of my time”, “condoms are good way to prevent pregnancy” are few examples of various aspects of environment that people evaluate and its often behaviorally focused. So it’s believed that attitudes are result of this continuing evaluation and defined as evaluation of entities, including behavior, with results in perception of like and dislike. so, attitudes are factors that may predispose individual to adopt or reject health-related behavior.

The theory of planned behavior may help to understand the complex relationship between attitude and behavior. According to this theory, attitude is not the only factor that influence behavior but other two important factors, perception of social norms and beliefs about one’s personal ability to perform a specific behavior also play important role in behavioral change. This theory believes that these three factors work in combination and each contribute to predicting behavior and behavior intent.

One other important point to be addressed that “attitude may or be influenced by behavior”. for example, a favorable evaluation of condoms may promote a man to rely on condoms to prevent STDs .Alternatively, a man who begins using the condom because its popular or because it’s easy to use, may subsequently

concludes that he believes that condom is useful thing to use. In latter case, the behavior preceded the attitude.[14]

Effective promotion of Behavioral change can be brought by addressing some of important behavioral determinants including, Perceived seriousness of condition. Perceived susceptibility to condition. Knowledge, attitudes, and beliefs about condition. Perceived and actual social norms related to the behavior (influence of peers, family, cultural and religious norms).Self-efficacy (belief in one's ability to carry out a specific behavior). Skills required to implement the behavioral change. Barriers and facilitators to intended change. Perceived and actual cost (financial or personal). Access to services or supports. Power dynamics within relationships, including distribution of power between partners.[15]

2.2 Theories of health behavior

Preventive health behavior is "any activity undertaken by an individual who believes himself to be healthy for the purpose of preventing or detecting illness in an asymptomatic state" (Kasl and Cobb 1966). There is no one theory or concept that explains why people perform certain behaviors. Many theories have been developed to describe, understand, explain, and influence health-related behavior. These theories help to understand that why people behave in certain way and what might be the motivation for behavior change. A theory can be explained as a combination of interrelated conceptions, definitions, and propositions that gives a collective layout of events by specifying relation among variables in order to anticipate the events or situation. Theories are helpful in various stages like planning, implementation and intervention of preventive behavior. Thus, theories have been very helpful in understanding behavior, as well as in providing effective suggestion to influence and change behavior.

Theories, that help to understand preventive health behaviors, can be divided into three categories:

1. Theories that describe the health behavior and behavior change of individuals. Commonly used theories include the health belief model;

the theory of reasoned action; the trans theoretical (or stages of change) model; and social cognitive theory.

2. Theories that describe the behavior of communities and environmental changes, such as the diffusion of innovation theory and the communication-behavior change model.
3. Theories that help people understand different approaches to societal change, such as community organization theories.

2.2.1 Health belief model

The original Health Belief Model, constructed by Rosenstock (1966), was mainly developed to explain willingness of an individual to take easy, preventive action like use of condom and later extended to predict compliance with medical advice. This model debated that willingness to take preventive action is related to perceived level of threat associated with a condition and from an analysis of the relative costs and benefits of acting preventively. It has main four components

- Perceived susceptibility
- Perceived severity
- Perceived barriers
- Perceived benefits

Two constructs were later added:

- Perceived efficacy
- Cues to action

Perceived susceptibility is how an individual assess the risk of getting the disease while perceived severity is individual assessment of the seriousness of the condition and its possible outcomes. To take action this person should believe that it would turn away the condition. An assessment of positive influences like risk reduction, Increased security and sensation of well being are include in perceived benefits and factors like cost, time embarrassment which discourage adoption of the preventive behavior are perceived barriers.

In this model ,the perceived threat will or will not change the behavior depends on whether cognitive evaluation tell the person that perceived benefits will

overweigh the perceived cost of doing so. The model did well, especially for early detection or for some conditions, such as infectious diseases, that people might find frightening, especially if they are uncertain about the effects of treatment methods.

2.2.2 Theory of planned behavior

This theory was proposed by Icek Ajzen in 1985 as an extension of theory of reasoned action. According to the theory of reasoned action ,human behavior is guided by behavioral beliefs that produce a favorable or unfavorable “attitude towards the behavior”, normative believes which leads to “subjective norms“ in terms of significance that other wanted them to perform the behavior and both results in higher “intention “and they are more likely to do so. Many studies showed high correlation of attitudes and subjective norms to behavioral intention and finally to behavior. But results of some studies argued that its not necessary that behavioral intention always lead to actual behavior because of some limitations. Namely, since behavioral intention cannot be the exclusive determinant of behavior where an individual’s control over the behavior is incomplete.

To overcome this issue izek introduced a new component “perceived behavioral control” to this theory which addresses an individual perceived ease or difficulty of performing the particular behavior. Which mainly determined by individual control beliefs about the presence of facilitating or impeding factors which may influence the behavior performance. Finally, with a sufficient degree of actual control over the behavior, individual are expected to carry out their intentions when opportunity strikes.

Conceptual frame work of this study is based on both theories. As this study is focused on the preventive behavior of dental patients that how they perceive the threat of HIV risk, what are their positive or negative attitudes towards aids prevention, intentions to practice preventive measures and finally develop a behavior. Health belief model will cover the perception component and its reflection on behavior while attitude, its relation to social norms and association to behavior will be addressed by theory of planned behavior.

2.3 Epidemiology of AIDS

Beside all these efforts taken in last 27 years, world is still being challenged by this deadly disease “HIV/AIDS”. Ratio of patients who start taking antiretroviral drugs to those who are being newly infected is 2:5.On global scale, the HIV epidemics has stabilized, although with high levels of HIV new cases and AIDS deaths. In most of highly affected countries, HIV has reduced the life expectancy up to 20 years.

Globally ,there were an estimated 33 million people living with HIV in 2007,about 2 million people died from aids in 2007,while the percentage of people living with HIV stabilized since 2000,the overall number HIV people living with HIV has steadily increased as a new infections occur each year.

Heavily affected area remain sub – Saharan Africa region which accounts about 67% of all HIV infected people and 75% of AIDS deaths in 2007.however some of other populous countries are also joining the race like Russian federation, Indonesia and various high income countries.

According to UNAIDS estimates, about 90,000 people, or 0.1 percent of the adult population in Pakistan, are infected with HIV. Officially reported cases are, however, much lower. As of September 2004, only some 300 cases AIDS and 2,300 cases of HIV infection were reported to the National AIDS Control Program. As in many countries, underreporting is due mainly to the social stigma attached to the infection, limited surveillance and voluntary counseling and testing systems, as well as the lack of knowledge among the general population and health practitioners. Although overall HIV prevalence is low in Pakistan, there is growing evidence of substantial high risk groups which could contribute to local concentrated epidemics.

According to UNAIDS, Pakistan's HIV/AIDS epidemic is concentrated among specific populations, including injection drug users. Although Pakistan previously had been identified as having a low HIV/AIDS prevalence, a recent UNAIDS report said that almost 40% of new HIV cases in the country occur among women, who currently represent 30% of HIV-positive adults in Asia. In addition, UNAIDS data showed that the most common modes of HIV/AIDS transmission in Pakistan are heterosexual sex and contaminated blood as well as contaminated instruments.[1]

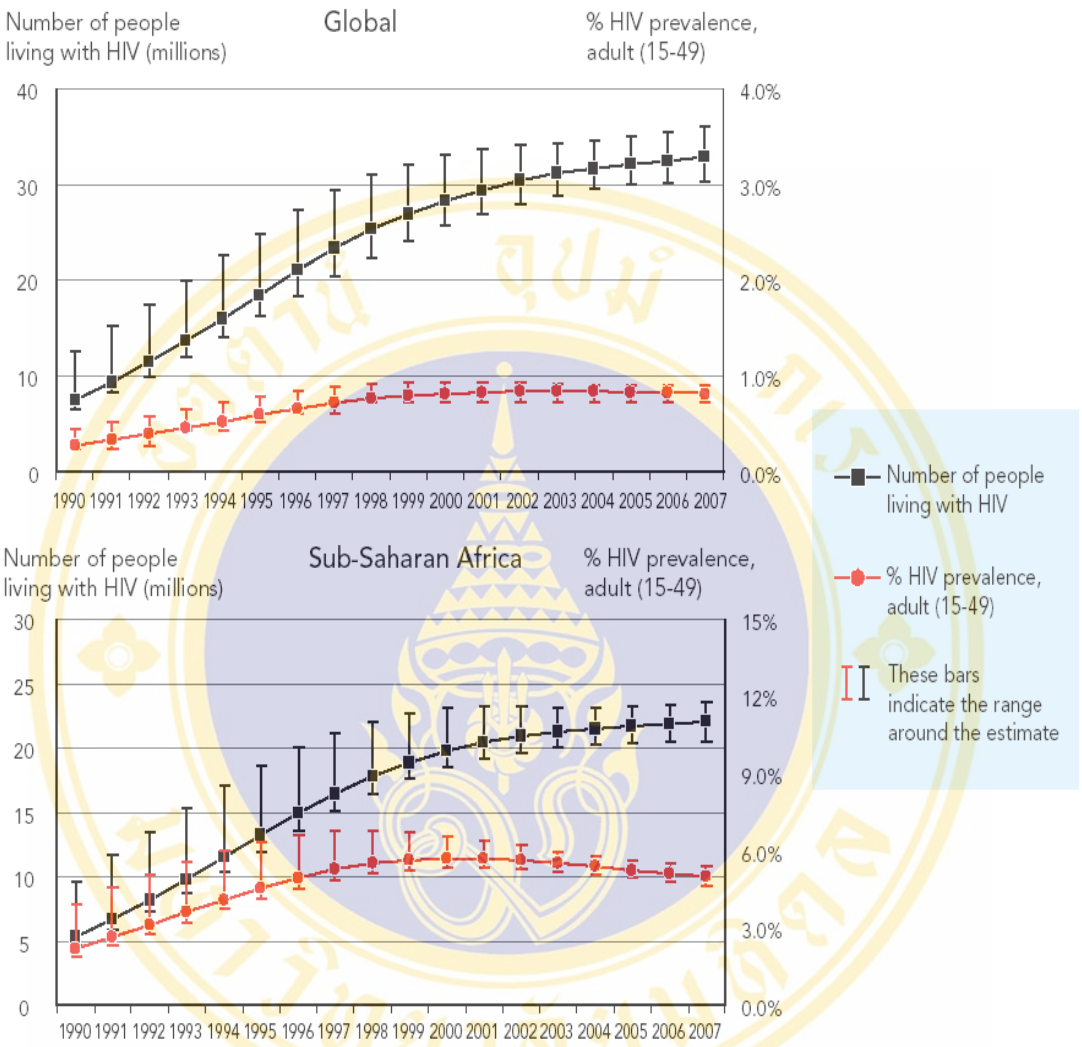


Figure 1 Estimated number of people living with HIV and adult HIV prevalence. Global HIV epidemic, 1990–2007; and, HIV epidemic in Sub-Saharan Africa, 1990–2007

2.4 Socio – cultural determinants and HIV/AIDS

Other than health AIDS has severe social problems like stigma and discrimination. Although AIDS a universal disease but it takes one from another to different countries in form of discrimination, this variation includes local epidemiology of AIDS and preexisting prejudice with in culture. In early days of

epidemics, AIDS positive people were deprived from their jobs, insurance, health care and education.

Women suffer more stigmatization than men. In Africa, women are often economically, culturally and socially disadvantaged and will lack equal access to treatment, financial support and education. It has even been found that in a number of societies women are mistakenly perceived as the main transmitters of sexually transmitted diseases. Men given more incentives in terms of treatment then women. Men are in advantage of excuse from their behavior which caused this infection but women are not. [11]

A variety of social, psychological and demographic variables have been found to correlate with AIDS related attitude. Among these most consistent variables have been age, education, personal contact with AIDS positive people, knowledge about HIV modes of transmission and attitude towards MSM.Stigma is more often attached to a disease whose cause is perceived to barriers responsibility. Especially when such behavior is considered as volunteer and immoral and socially disapproved, it is likely to be stigmatized and to evoke anger and immoral rather than pity or empathy. Greater stigma is associated with the perception of AIDS as contagious and illness that are unalterable and degenerative. Symbolic aids stigma results from social meanings attached to AIDS, it represents the use of disease as a mean for expressing variety of attitudes.[10]

In order to address these multifaceted problems stigma and discrimination, programs are needed to operate at various levels (individual, family, community, organizational, institutional, government, and legal) and use a range of approaches to engage many different groups. Empowerment of people living with HIV, education about HIV, and activities that foster interaction between people living with HIV and key audiences, including policy-makers and high-profile celebrities are the key component for success of these programs. [1].

The situation concerning Pakistan and HIV is indeed very precarious. The country lies at a very crucial junction. HIV has as yet not exploded. Most of the populace remains safe, as for now. However, concentrated epidemics have emerged, which means that very little time is left before a steep rise in infections occurs. The

battle against HIV/AIDS in Pakistan has to be fought on a number of fronts: not just the afflicted population, but also on changing peoples' perspectives and ushering in the proper government policies and response measures The Government has to come forward and face the truth about HIV in Pakistan. Embarking not only upon national-level mass awareness programs, practical steps including wide-spread screening for the high-risk populations has also to be instituted. Stigma and discrimination about HIV/AIDS in society could only be removed when prominent figures including politicians and sport stars start discussing about HIV/AIDS in public. As soon as this stigmatization barrier is overcome, a major chunk of the battle against HIV in Pakistan would be conquered. What has to be reiterated again is that the time to act is now. Timely steps taken at the present can go a long way in preventing a wide-spread HIV epidemic in Pakistan.

2.5 Socio-economic determinants of HIV/AIDS

Countries which are highly affected with AIDS relatively have poor socio-economic condition. Average statistics show that in the heavily impacted countries, almost 40 per cent of the population aged 15 years or over are illiterate, one third of the population are undernourished, and only a little more than half the people have access to improved sanitation. AIDS disproportionately affected those, which have lowest economic and social resources, and their health-related knowledge and information, and access to health care and treatment are least..

Countries with high prevalence and weak economies has severely suffered from AIDS epidemics. A number of efforts have been made to model the impact of HIV/AIDS on economic growth (United Nations, 2004a). In some cases, estimates of the economic impact of HIV/AIDS have been “small”, whereas in others, annual reductions in economic growth of from 2 to 4 percentage points of gross domestic product (GDP) (compared with a hypothetical “no-AIDS” situation) have been found. Beyond its effects on GDP, the HIV/AIDS epidemic is likely to increase income inequality and poverty. However, the other important factors like war, natural disasters, poor economic management and fiscal policy have their own impact on country economy and difficult to isolate from HIV/AIDS effect.

Households are the most who are affected by AIDS, due to long term illness and after the death of victim, lack of income and the cost of care can force households to spend their savings, sell their productive assets and borrow money. AIDS affected households often make a rapid transition into poverty. As this disease strikes young adults in their most productive years, it has a particularly destructive effect on families and households and on the long-term economic development of country.

The expected average annual growth rate 2.5 % per year for period 2005-2015 would decrease up to 2.0% because of AIDS in most of heavily affected African countries. In the seven countries with HIV prevalence of 20 per cent or more, AIDS is projected to bring population growth almost to a halt, with an increase of just 0.6 million persons between 2005 and 2015. In the absence of AIDS, their overall population would have increased by 17 million. the seven most affected countries in both high-income and developing countries, the population is projected to be more than one third smaller in 2025 than it would be in the absence of AIDS. [13]

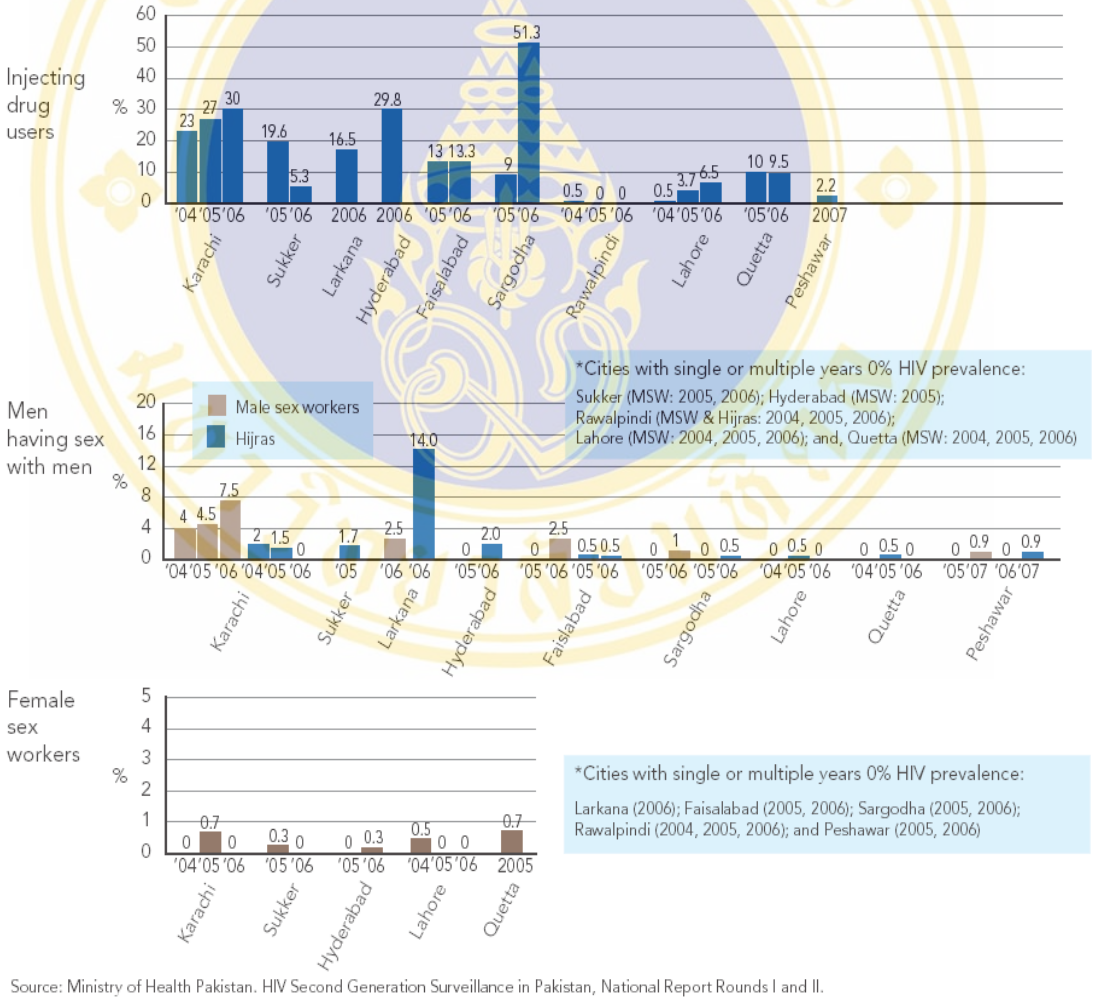
2.6 Mode of Transmission

In countries like Canada and North America MSM unprotected sex between men remained the main cause of HIV transmission, which counts about 40 % and 60 % of new HIV diagnosed cases, respectively. Germany struck by 96% of new MSM, HIV cases. However in Middle East and North Africa, MSM accounts only 6% of new cases. While in Australia and New Zealand MSM again counted as primary transmission factor.

Unprotected Heterosexual sex remained the second main cause of HIV transmission in Canada, north America and most of European countries except Estonia, Latvia, Lithuania and Poland where the main cause is injecting drug use.18% of new diagnosed cases in north America caused by multiple use of contaminated injecting equipments and in Canada is about 19%.while in central Europe, HIV diagnosis in injecting drug users have decreased.

Primary source of transmission in Middle East and North Africa includes unprotected paid sex and the use of contaminated drug injecting equipments.[1]

In health care setting, doctors and patients have been infected with HIV after being stuck with needles and other surgical instruments containing HIV infected blood or less frequently doctors or patients open wound come in contact with infected blood.HIV transmission from dentist to patient and patient to patient has been reported. Other factors like Kissing, human bite, saliva, tears and blood sucking insect biting do not show significant evidence of HIV spread. [2]



Source: Ministry of Health Pakistan. HIV Second Generation Surveillance in Pakistan, National Report Rounds I and II.

Figure 2 HIV prevalence among injecting drug users, men having sex with men, and female sex workers in Pakistan, 2004-2007*

2.7 Prevention

The way through which HIV infection spreads among different countries and population groups varies by mean of sexual transmission, through blood and mother to child. Different steps can be taken for each route of transmission by individual and community as well as at national and international level to prevent or reduce the risk of HIV spread. Each risk category should be targeted accordingly, however it should be kept in mind that many people don't fit into only one risk category. For example, injecting drug users need access to condoms and safer sex counseling as well as help to reduce the risk of transmission through blood.

The key steps that can be done in best way includes promotion of widespread awareness programs, media campaigns and education at school level. Promotion of safer behavior and counseling among HIV positive patients is another important step in prevention of HIV spread.

The active sex group which is highly at risk of getting HIV infection can be prevented by giving them comprehensive sex education which include training in life skills such as negotiating healthy sexual relationships, as well as accurate and explicit information about how to practice safer sex. Adaptation of safer sexual behavior can be encouraged by engaging media campaigns, social marketing, peer education and small group counseling.

The use of routinely sterilized equipments in medical procedures which involves blood contact is another important step in HIV prevention. Disposal of used equipments, if possible, is highly recommended. Blood being used for transfusion should be screened for HIV virus to minimize the risk.[3]

Current prevention strategies can be effective in reducing the risk of HIV exposure, but prevention programmes, especially in countries with concentrated epidemics, fail to reach many people at high risk of exposure to HIV, including a majority of men who have sex with men and injecting drug users. Young people aged 15–24 account for 45% of all new HIV infections in adults, and many young people still lack accurate, complete information on how to avoid exposure to the virus.

Prevention programmes will not be optimally effective unless they are supported by effective initiatives to address the social factors that increase risk and vulnerability, including gender inequality, HIV stigma and discrimination, and the social marginalization of the populations most at risk of HIV exposure.

Sustaining prevention gains represents one of the great challenges in HIV prevention. To maintain a robust prevention response, countries need to nurture a “prevention movement”, build the human and technical capacity needed to sustain prevention efforts, and work to stimulate greater demand for prevention services.[1]

2.8 Virology

The HIV virus belongs to lentivirus family and divided in two types. HIV 1 is currently widespread among humans and become symptomatic in 5 years of infection and HIV 2 is localized in Africa and it takes longer to show symptoms.

The HIV virion’s diploid genome consists of 2single-stranded RNA molecules within a host-derived lipid bilayer. HIV has an affinity for CD4+ T-cells and monocytes. The HIV virus targets the host immune system, making it a very difficult pathogen for the human body to fight. In addition to making the host highly susceptible to secondary infections, rapid mutation rates within the viral genome make vaccine and drug development difficult. During the 20 years since the discovery of the HIV virus, many significant breakthroughs have been made concerning the molecular biology and pathogenesis of the virus. HIV infection is characterized by a decline in Tcell count and function, leading to a weakened immune system. HIV also induces B-cell polyconal activation and a lack of antibody specificity. The host receptors important in viral recognition are CD4 and one of two chemokine receptors: CCR5 or CXCR4.[4]

2.9 Risk groups/Risk Factors in Pakistan

The internal and external migrant groups including truck drivers are at high risk for HIV infection, as they are apart from their wives for long period of time,

and thus they are in habit of engaging in casual sexual relationship with commercial sex workers and keeping their wives at risk for contracting HIV infection.

Commercial sex workers whether operating privately or at red light areas in major cities like Karachi and Lahore are at high risk for HIV infection for themselves as well as for their visitors.MSM is also being considered as a risk group although it is not that much common in Pakistan.

Heroin is one of major drug being used in Pakistan. Previously inhalation was used as the primary way to use heroin, but now it is suggested that heroin addicts are now using injections more often. Injecting drug user are at risk of parenteral transmission of HIV and also risk of sexual transmission, as some drugs lower inhibitions resulting in high risk of sexual encounter.

The unsafe use of contaminated needles and instruments in health care practices is also contributing to the risk of HIV transmission. Another contributing factor is blood transfusion as blood screening is not being or poorly practiced in most of hospitals and blood banks. There is also inadequate treatment of STDs, which is considered as cofactor to HIV transmission in Pakistan health facilities.

Low level of knowledge about HIV/AIDS and its mode of transmission among population is one of major contributing factor. Free discussion on problems related to sexuality or STDs infections, including HIV/AIDS are not practiced in Pakistan due to conservative Muslim society, cultural and social barriers.

2.10 Recent studies regarding knowledge and attitude

Numerous studies are done on knowledge and attitude towards HIV/AIDS. Conclusions of few studies are as follow

The present study evaluated the knowledge and attitude of Iranian high school students towards HIV-positive and AIDS patients.. The majority of students had accurate knowledge about HIV/AIDS modes of transmission with 67–96% correctly answering each of questions. However, many misconceptions were still noted relating to HIV/AIDS, with 9% of students believing that children would never be affected by HIV/AIDS, 10% believing that HIV-positive people can be recognized

by their appearance, 9% and 11% believing that there is a cure and vaccine for AIDS respectively. In this study, there was a substantial negative (intolerant) attitude towards AIDS and HIV positive patients.[5]

The aim of this study was to investigate and present some pertinent comments concerning Acquired Immunodeficiency Syndrome (AIDS) knowledge, attitudes and misconceptions among the general population in a city of west Turkey. Respondents displayed a fairly good to excellent degree of knowledge about HIV/AIDS. Individuals with higher degrees of education indicated more correct responses in all items relating to knowledge of HIV/AIDS. In general, the respondents' attitudes towards AIDS and people with AIDS were found to be tolerant and positive, with one answer choice showing that the majority of the respondents agreed with the statement that those with HIV/AIDS must be supported, treated and helped (90.7%). Moreover, the proportions of the respondents' misconceptions were found to be significantly low for all the items. However, nearly one fourth of the respondents agreed with the misconceptions 'AIDS is a punishment by God' and 'One is not infected with HIV/AIDS if engaged in sport and well nourished.[6]

AIDS knowledge and risk perception in urban and rural communities in Arusha region, Tanzania. For men and women, having higher education and reporting having frequently discussed AIDS were significantly associated with a high score on the AIDS knowledge scale. In addition, Muslim men scored higher than other men, while for women, living in Arusha town and knowing someone with AIDS were significantly associated with a high knowledge score. Similarly, living in Arusha town and frequently discussing AIDS were significantly associated with perceived susceptibility for HIV infection among both men and women. Previous sexual behavior was also associated with increased perceived risk for HIV infection. For men, condom use was, significantly and consistently across measures, associated with perceived susceptibility, while for women, having had two or more sexual partners during the past six months and ever having used a condom was significantly associated with perceived susceptibility. In addition, women 25 to 34 years old perceived themselves to be at higher risk than did younger or older women.[7]

HIV/AIDS Knowledge, Attitudes, and Educational Needs among Arab University Students in United Arab Emirates **.**Response was 89%; 119 males and 148 females. Knowledge scores about HIV/AIDS were low for 75%, moderate for 24%, high for <1%. Although 90% knew main routes of infection, there were misconceptions about transmission, and only 31% knew there is no vaccine and 34% no cure. Religion was stated as a reason to avoid extramarital relationships by 91% and sexually transmitted diseases (STDs) by 38%; 94% favored premarital testing. Attitudes toward people living with HIV (PLH) were neither friendly nor tolerant, including 97% who felt all people entering UAE should be tested, 53% that PLH should be forced to live apart and only 27% who felt children with HIV should be allowed to attend school. Ninety-six percent stated that young people should be taught how to protect themselves and 57% that teaching at school was insufficient. Main information sources were books/media; preferred sources were media, schools, and health professionals. Males scored higher on knowledge and were more susceptible to fear of STDs, society, and family; females showed greater compassion and interest in premarital testing and education to protect themselves.[8]

These studies show that people in these areas have significant knowledge about AIDS and high values of perception but misconception against AIDS. While knowledge alone is often insufficient to produce long-lasting behavior change, an accurate understanding of the risks of HIV and how to prevent exposure is a prerequisite to risk reduction. Tragically, many young people lack basic knowledge about HIV prevention. Survey data from 64 countries indicate that 40% of males and 38% of females aged 15–24 had accurate and comprehensive knowledge about HIV and about how to avoid transmission. Although this represents an improvement, especially for females, over 2005 knowledge levels, when 37% of males and 28% of females were found to have a basic knowledge of HIV, knowledge levels in 2007 are still well below the *Declaration of Commitment's* goal of ensuring comprehensive HIV knowledge in 95% of young people by 2010. While more than 70% of young men know that condoms can protect against HIV exposure, only 55% of young women cite condom use as an effective prevention strategy. In Somalia, only 4% of young women ages 15–24) report accurate knowledge of HIV, and only 11% of adult females are aware that condoms can prevent HIV transmission.[1]

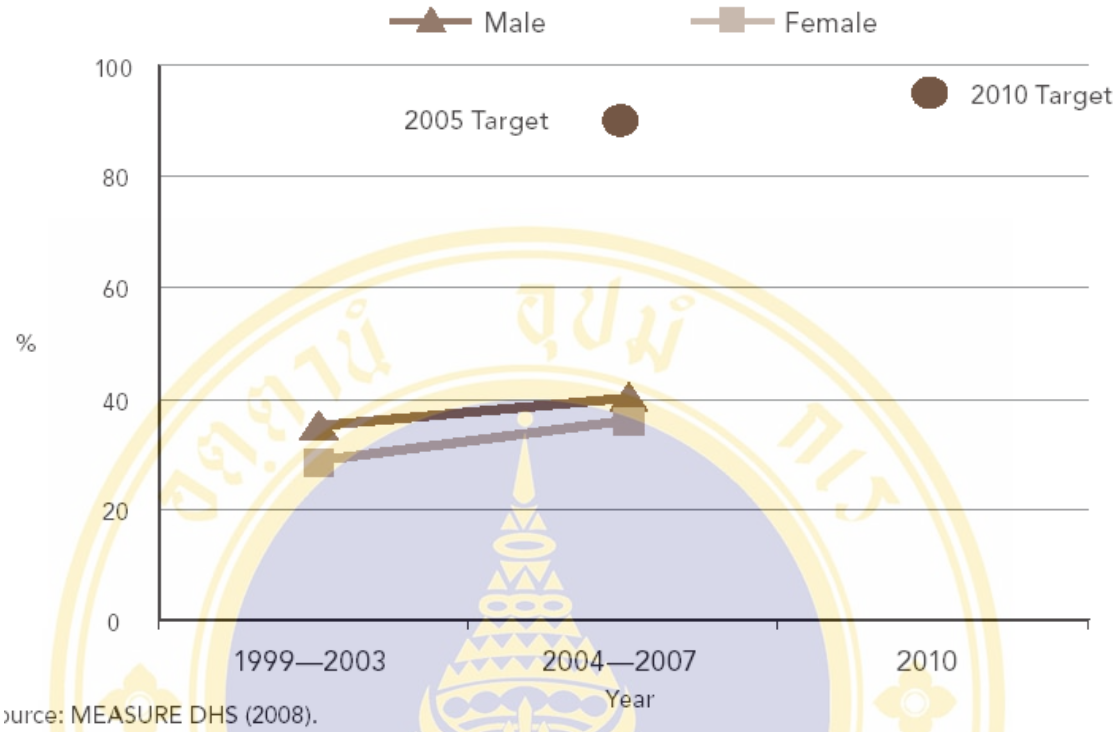


Figure 3 Comprehensive knowledge of HIV among young people (ages 15–24), 1999–2007

Children having very little knowledge about virus transmission and understanding about disease in their early five years of schooling, even in most advanced education system. . General knowledge is important at this stage, while the next five years are critical for more specific knowledge about HIV/AIDS. Most of people who are infected, are illiterate or do don't have enough knowledge and don't understand the nature of disease. Due to flaw in system, illiterate people do not have access to information and only few have little scientific knowledge in terms of physiology and biology. Major cause for aids epidemics is ignorance. Particularly in the most affected countries the need for prevention education flows from the types of ignorance closely associated with the epidemic Awareness of people about HIV risk and reduction of aids prevalence mainly depends on prevention education. Prevention education in now being considered as main vaccination for AIDS, as it and must generate the attitudes, provide the skills and sustain the motivation necessary for changing behavior to reduce risk and vulnerability according to mentalities and the culture of people within which they are embedded.

The knowledge, attitudes and skills which are being transmitted prevention education must be culturally adapted otherwise they will be resisted by traditional creeds and customary principles. Thinking, behavior, principals and practices are heavily influenced by traditional and local mores. They are also supported by norms of propriety, customs of marriage or religious beliefs which may sustain the silence about the epidemic, its causes and consequences. Communities and cultures interact with the epidemic and undergo changes from this interaction. Prevention education must likewise keep pace with the dynamics of the epidemic. Prevention program should not be aimed to overcome the traditional barriers and conventional obstacles but to mobilize the dynamic cultural values for changing behaviors and adapting customs, particularly when faced with a deadly challenge.

Education has played the role of foundation in reducing the aids epidemics. Education, whether through schooling or non-formal means such as public Information, mass media or community organizations, contributes to the prevention effort. It provides protection against individual vulnerability and gives the tools for understanding and avoiding risk. It creates a context in which the epidemic can be discussed and understood, and in which those infected and affected are cared for and included in society. By HIV/AIDS prevention education, UNESCO means offering learning opportunities for all to develop the knowledge, skills, competencies, values and attitudes that will limit the transmission and impact of the pandemic, including through access to care and counseling and education for treatment.[12]

CHAPTER III
RESEARCH METHODOLOGY

3.1 Research Design

The design of this study was a cross-sectional analytic study.

3.2 Study Population

The targeted population in this study was indoor dental patients at Surgery department, Dental section, Sademan Provisional Hospital, city Quetta, province Baluchistan, Pakistan.

3.3 Sample Size

Indoor dental patients were targeted population of this study**.** As the total number of patients is about approximately 1200/month (winter) on average basis, as there is no data presently available on preventive behavior, it was assumed at 50%(.05).Level of significance is set at 95%,then the sample size estimation should be used on this formula

$$n = \frac{Z\alpha^2 P\,(1-P)}{d^2}$$

Where

n = estimated sample size

α = level of statistical significance is set at 0.05, therefore Z =1.96

d = absolute precision of study set at 8% (0.08)

P = anticipated proportion of individual in population possessing the characteristic of study interest = 50% (0.50)

$$N = \frac{(1.96)^2(0.50)(0.50)}{(.08)^2} = 150$$

3.4 Research Instrument

A self –administrated structured questionnaire was used for data collection.

It included of six parts:

Part 1 : Socio-demographic:

Gender, age, religion, income, occupation, education, marital status, and marriage duration.

Part 2 : Knowledge :

Knowledge of AIDS included 14 questions with total score of 14 and divided into two levels of knowledge, comparing with mean score.

High knowledge

Low knowledge

Part 3 : Perception:

Patients were asked 6 questions with total score of 30 to agree or disagree with perception of severity and susceptibility by using Likert scale and divided into high and low groups based on mean of total score.

5 score = strongly agree
4 score = agree
3 score = don't know
2 score = disagree
1 score = strongly disagree

Part 4 : Attitude:

Patients were asked 4 question with total score of 20 regarding their attitude towards AIDS prevention, by using believe and disbelieve Likert scale and grouped into positive and negative groups based on the mean of total attitude score.

5 score = strongly believe
4 score = believe
3 score = don't know
2 score = don't believe
1 score = strongly don't believe

Part 5 : Preventive behavior:

Including 5 questions with score of 5, dividing into two levels of positive and negative groups based on mean of total behavior score.

1 score = yes
0 score = no

Part 6 : Source of information:

Patients were asked 5 questions regarding source of information about HIV/AIDS.

3.5 Data Collection:

Data was collected by use of self- administered structured questionnaire and also facilitated by the researcher on the sample population in surgery department, dental section, Sandeman Provisional Hospital, Quetta, Pakistan.

3.6 Data Analysis

The data collected was processed and analyzed by using Minitab. Descriptive statistics was performed by using frequency, percentage, mean, standard deviation and median in order to describe the socio-demographic characteristics, knowledge, perception, attitude and preventive behavior.

Chi square test was used for analytic statistics in order to find association between knowledge, attitude, perception and preventive behavior according to the conceptual frame work and objectives of this study.

CHAPTER IV
RESEARCH RESULTS

The research analysis result is divided into two parts. The first descriptive part deals with the general description of socio-demographic characteristics, knowledge, perception and attitude of the respondents While the second analytics part is the association of preventive behavior with socio-demographic characteristics, level of knowledge, level of perception and level of attitude.

4.1 Socio-demographic characteristics

The study population consists of 150 patients attended Sandeman Provisional Hospital Quetta Baluchistan. As observed from table 1, the respondent mean age was 36.04 years.70 percent of respondents were among 18 to 40 years of age. The group of respondents those who were more than 40 years of age were 30.33 percent.

There were 87 male and 63 female with percentage of 58.00 and 42.00 respectively. Mostly Muslims with 96 percent, remaining Christians and Hindus with 2.6 and 1.3 percents respectively.

About half of respondents 48 percent were highly educated with and 16.67 were with no education. Respondents who attended primary, middle and secondary school were 9.33, 11.3 and 14.67 respectively.

Regarding monthly income 33 percent were earning below Pkr 5000, but most of them were students getting pocket money from their parents.26 percent fall in range of Pkr 5000-10000 , and 19.33 percent earning fine income between Pkr 10000 -20000. Respondents earning more than 20000 Pkr were 21.33 percent; most of them were businessman or senior government officers.

.

Table 1 Number and percentage of respondents by socio-demographic factors

Socio-demographic factors	Distribution	
	Frequency (n)	Percentage (%)
Age (years)		
18-25	28	18.67
26-30	28	18.67
31-35	25	16.67
36-40	24	16.00
41-45	14	9.33
46-50	12	8.00
51-55	8	5.33
More than 55	11	7.33
Gender		
Male	87	58.00
female	63	42.00
Religion		
Islam	144	96.00
Christian	4	2.67
Hindu	2	1.33
others		
Education		
No education	25	16.67
Primary school	14	9.33
Middle school	17	11.33
Secondary school	22	14.67
degree	72	48.00

Table 1 Number and percentage of respondents by socio-demographic factors (cont.)

Socio-demographic factors	Distribution	
	Frequency (n)	Percentage (%)
Income (pkr)		
Less than 5000	50	33.33
5000-9999	39	26.00
10000-19999	29	19.33
More than 20000	32	21.33
Occupation		
Farmer	9	6.00
Businessmen	17	11.33
Govt Servant	48	32.00
Laborer	23	15.33
Unemployed	20	13.33
Others	33	22.00
Marital status		
Married	81	54.00
Unmarried	60	40.00
Divorced	2	1.33
widow	7	4.67
Marriage duration(years)	21	24.42
Less than 5	13	15.12
5 to 10	52	60.47
More than 10		

Regarding occupation, majority of respondents were government officers, comprising 32 percent of study population. Second was laborer with 15.33 percent followed by unemployed and businessman with 13.33 and 11.33 percent respectively. Others which were mostly students and housewives with 22 percent of study population. Only 6 percent were farmer by occupation.

More than half of the respondents 54.00 percent were married and 40 percent were unmarried. Divorced and widows were 1.33 and 4.67 percent respectively. Majority of respondents were married more than ten years with 60.47 percents. Duration between 5 to 10 years was 15 percent and 24 percent was below 5 years of duration. (table 1)

4.2 Level of knowledge on HIV/AIDS

Regarding level of knowledge on HIV/AIDS, the measurement was constructed with 14 questions with yes and no answers. Questions were mainly about AIDS, its mode of transmission and cure. Score for correct answer was 1 and 0 for wrong. Appreciable numbers of respondents were aware of AIDS and knew that HIV is causative agent. Most of respondents were well known about the main source of transmission, like contaminated instruments, sexual intercourse and blood transfusion. However misconception was found among various respondents that AIDS may transmit through coughing eating together, by drinking water in same glass and by touching. Most of respondents agreed that there is no cure for AIDS and person may look healthy while having HIV at same time.(table 3)

Table 2 Number and percentage of respondents by level knowledge on HIV/AIDS

Level of knowledge on HIV/AIDS	**Distribution**	
	Frequency (n)	**Percentage (%)**
high	90	60
low	60	40
	Mean : 9.993	**SD**: 3.146

Table 3 Number and percentage of respondents by question asked about knowledge on HIV/AIDS

Level of knowledge	**YES N / %**	**NO N / %**
Do you know that what is AIDS?	114 / 76.00	36 / 24.00
Cause of AIDS is HIV virus	96 / 64.00	54 / 36.00
How HIV/ AIDS is transmitted?		
By contaminated instruments	142 / 94.67	8 / 5.33
By Mosquito bite	64 / 42.95	85 / 57.05
By blood transfusion	140 / 93.96	9 / 6.04
By touching an HIV positive person	37 / 25.00	111 / 75.00
By sexual intercourse	141 / 94.00	9 / 6.00
By using the same drinking glass	51 / 34.23	98 / 65.77
By eating together with HIV positive person	39 / 26.35	109 / 73.65
By Can be transmitted through coughing	63 / 42.00	87 / 58.00
At present time, AIDS has cure	34 / 22.82	115 / 77.18
person may look healthy and have the AIDS virus at same time	82 / 55.03	67 / 44.97

Respondents were divided into two groups, high and low level on the basis of mean of total score of respondents answer ,which was 9.993 with SD = 3.146,while maximum of total was set at 14score.Results show that 60 percent of respondent show high level of knowledge comparing to 40 percent of respondents having low knowledge level.(table 2)

4.3 Level of attitude towards HIV/AIDS

Respondents were asked four questions with total score of 20 regarding their attitude towards HIV/AIDS prevention. Likert scale with 5 categories from strongly believe to strongly disbelieve was used. Score five was given to respondents who strongly believed as compared to score 1 of those who strongly did not believe. Most of respondents had strong believed that use of sterilized instruments in dental clinic can protect them from HIV/AIDS and it is good to make sure that instruments are being sterilized properly. Considerable amount of respondents were unsure about avoiding sex with their partner, if they feel that they are infected with HIV, however few respondents said that they will continue sex besides having doubt.(table 4)

Table 4 Number and percentage of respondents by questions asked about attitudes towards HIV/AIDS

Level of attitude	SB n / %	B n /%	NS n / %	BNB n / %	SDNB n / %
Using sterilized instruments in dental clinic ,will protect you from being infected with HIV	58 38.67	57 38.00	33 22.00	1 0.667	1 0.667
It is good to make sure that instruments are sterilized before being used on you	69 46.00	55 36.67	25 16.67	1 0.667	0 0.00
One should never take a chance of being treated with unsterilized instruments	47 47.33	45 30.00	31 20.67	3 2.00	0 0.00
It is better to avoid sex with your partner, if you feel that you are infected with HIV	62 41.89	27 18.24	45 30.41	8 5.41	6 4.05

Table 5 Number and percentage of respondents by level attitudes towards HIV/AIDS

Level of attitude towards HIV/AIDS	Distribution	
	Frequency (n)	Percentage (%)
High	69	46
Low	81	54
	Mean : 16.473	**SD**: 2.926

Respondents who scored more than 16 were graded as having high level of attitude and those who got score below 16 were given low level of attitude. According to this criterion 46 percent of total respondents were with high attitude and 54 percent possess low level of attitude. Mean score of respondent's attitude was 16.473 with SD: 2.926 and maximum was 20.(table 5)

4.4 Level of perception towards HIV/AIDS

To access that how many respondents perceive HIV/AIDS as a risk and threat to themselves and their family, likert scale with 5 categories from strongly agree to strongly disagree was used. Score five was set for strongly agree as compared to score 1 for strongly disagree. Most of respondents were agreed with the fact that cannot be cured, once infected with HIV. Majority of respondents agreed that HIV/AIDS is a dangerous disease and considered it as severe threat to them and their families. Most of respondents considered dental clinic as potential place for HIV infection, however few respondents were not agreed with this opinion.(table 6)

Table 6 Number and percentage of respondents by questions asked about perception towards HIV/AIDS

QUESTIONS	SA	A	NS	DA	SDA
	n / %	n / %	n / %	n / %	n / %
One can't be cured, if infected with AIDS/ HIV.	48 32.00	53 35.33	35 23.33	9 6.00	5 3.33
One can die from AIDS Complications.	67 44.67	50 33.33	30 20.00	2 1.33	1 0.67
Being infected with HIV/AIDS is dangerous	76 50.67	45 30.00	27 18.00	2 1.33	1 0.67
AIDS is a severe threat to you and your family	60 40.00	53 35.33	32 21.33	4 2.67	1 0.67
One should be treated by sterilized Instruments in dental clinic.	72 48.00	45 30.00	32 21.33	1 0.67	0 0.00
One might get HIV while being treated in dental clinic	50 33.33	46 30.67	42 28.00	11 7.33	1 0.67

Table 7 Number and percentage of respondents by level of perception towards HIV/AIDS

Level of perception towards HIV/AIDS	**Distribution**	
	Frequency (n)	**Percentage (%)**
High	70	46.67
Low	80	53.33
	Mean : 24.620	**SD**: 3.942

Respondents who scored more than 24 were graded as having high level of perception and those who got score below 24 were given low level of perception. According to this criterion 46.67 percent of total respondents were with high perception and 53.33 percent possessed low level of perception. Mean score of respondent's perception was 24.620 with SD: 3.942 and maximum was 30.(table 7)

4.5 Level of preventive behavior towards HIV/AIDS

Respondents were asked five questions to access their level of preventive behavior towards HIV/AIDS. One and zero score was given to correct and wrong answers respectively. Majority of respondents asked he doctor about sterilized instruments, when they visited dental clinic last time but most of respondents didn't make sure that instruments are properly being sterilized. Only few respondents found it necessary to talk about HIV/AIDS prevention to their partners. Almost half of respondents rejected taking treatment on knowing that instruments are unsterilized.(table 8)

Table 8 Number and percentage of respondents by questions asked about preventive behavior

QUESTIONS	YES n / %	NO n / %
Did you ask for sterilized instruments in dental clinic last time?	79 53.38	69 46.42
Have you ever talked about HIV/AIDS prevention to your partner?	25 17.12	121 82.88
Have you ever tried to make sure that instruments are being sterilized properly?	66 44.00	84 56.00
Have you ever rejected to take treatment by unsterilized instruments?	83 55.70	66 44.30
Have you ever tried to take proper knowledge about HIV/AIDS?	54 36.00	96 64.00

Table 9 Number and percentage of respondents by level of preventive behavior towards HIV/AIDS

Level of preventive behavior towards HIV/AIDS	**Distribution**	
	Frequency (n)	**Percentage (%)**
High	62	41.33
Low	88	58.67
	Mean : 2.047	**SD**: 1.577

Respondents were divided into high and low levels of behavior on the base of total mean score (2.047) of respondents with SD: 1.577 and maximum was 5 score. Respondents with high level of behavior were 41.33 percent of total study population. Respondents with low level of behavior were higher with 58.67 percent. (table 9)

4.6 Source of main information

Table 10 Number and percentage of main information source about HIV/AIDS

Main source of information	**Distribution**	
	Frequency (n)	**Percentage (%)**
television	45	30.20
doctor	3	2.01
family	5	3.36
friends	17	11.41
newspaper/leaflets	43	28.86
radio	4	2.68
others	32	21.48

Television, newspaper and leaflets remained main source of information for respondents. Other Sources like friends, family and radio didn't show any good results. Doctor's contribution in information dissemination remained lowest. Others included mainly internet and medical journals were 21.48 percent and also those illiterate respondents who received no information on HIV/AIDS.(table 10)

4.7 View of respondents on HIV/AIDS information

Table 11 View of respondents on HIV/AIDS information

Categories	Distribution	
	Frequency (n)	**Percentage (%)**
Information necessary		
yes	112	75.17
no	4	2.68
not sure	33	22.15
Information available		
Adequate	32	21.48
Not adequate	74	49.66
Not sure	43	28.86
Interested in gaining		
Very much	56	37.58
Not that interested	72	48.32
no	21	14.09

Majority of respondents totally agreed that HIV/AIDS information is necessary, while few of them were not sure about it. Appreciable number respondents were not satisfied with the availability of HIV/AIDS information. Respondents who were very much interested in gain information about HIV/AIDS were more than those were not at all interested.(table 11)

4.8 How often respondent receive information on HIV/AIDS

Table 12 How often respondents receive information on HIV/AIDS

Interval of information on HIV/AIDS	Distribution	
	Frequency (n)	Percentage (%)
Every three month	42	28.19
Every six month	15	10.07
More than one year	92	61.74

Respondents who got regular information on HIV/AIDS every three and six months were few against those who did not get information in whole year, which is mainly illiterate group who cannot read any informative literature or newspaper and leaflets. It also includes those respondents who did not have any prescription for any magazine or journal.(table 12)

4.9 Association between socio-demographic factors and preventive behavior

Respondents with in age group of 18-25 were only one among young's, who possessed high level of preventive behavior. While all other respondents ranging from age of 26 to 45 years showed high levels of low preventive behavior. However levels of preventive behavior among respondents who were more than 46 years of age remained more or less equal. Analyzed data did not find any statistically significant association between age factor and preventive behavior $\chi^2 = 7.313$, p-value = 0.198.

Results could not find any statistically significant association between gender and preventive behavior .High preventive behavior in male was high as

compared to female. But low preventive behavior in females was 42.05 percent as compared to high 57.95 percent of that male.

Table 13 Association Between and socio-demographic factors and preventive behavior

Socio-demographic factors	**Preventive behavior**			
	High		**Low**	
	n	**%**	**n**	**%**
Age (years)				
18-25	16	25.81	12	13.64
26-30	11	17.74	17	19.32
31-35	10	16.13	15	17.05
36-40	5	8.06	19	21.59
41-45	6	9.68	8	9.09
More than 46	14	22.58	17	19.32
$\chi^2 = 7.313$ p- value = 0.198				
Gender				
Male	36	58.06	51	57.95
Female	26	41.94	37	42.05
$\chi^2 = 0.000$ p- value = 0.989				
Religion				
Islam	61	98.39	83	94.32
Others	1	1.61	5	5.68
$\chi^2 = 1.568$ p- value = 0.401				

Table 13 Association Between and socio-demographic factors and preventive behavior (cont.)

Socio-demographic factors	Preventive behavior			
	High		Low	
	n	%	n	%
Education				
No education	2	3.23	23	26.14
Low education	17	27.42	36	40.91
High education	43	69.35	29	32.95
$\chi^2 = 23.369$ p- value = 0.000				
Income (pkr)				
Less than 5000	17	27.42	33	37.50
5000-9999	14	22.58	25	28.41
10000-19999	19	30.65	10	11.36
More than 20000	12	19.35	20	22.73
$\chi^2 = 8.7333$ p- value = 0.032				
Occupation				
Businessmen	8	12.90	9	10.23
Govt Servant	25	40.32	23	26.14
Laborer	13	20.97	39	44.32
Others	16	25.81	17	19.32
$\chi^2 = 8.934$ p- value = 0.030				

Table 13 Association Between and socio-demographic factors and preventive behavior (cont.)

Socio-demographic factors	Preventive behavior			
	High		Low	
	n	%	n	%
Marital status				
Married	35	56.45	46	52.27
Unmarried	25	40.32	35	49.77
Others	2	3.23	7	7.95
χ^2 = 1.476 p-value = 0.478				
Marriage duration(years)				
Less than 5	8	22.22	13	26.00
5 to 10	6	16.67	7	14.00
More than 10	22	61.11	30	60.00
χ^2 = 0.225 p-value = 0894				

There was no significant association was present between religion and preventive behavior of respondents. Most of respondents were Muslims whose high preventive behavior remained with 98.39 percent as compared to others which were Christian and Hindus, who were 1.61 percent.

Respondent with high education mostly who attended university and college were on top in high preventive behavior as compared to other groups. However respondents who were not educated were on top among low preventive

behavior respondents.. Association between education and preventive behavior found statistically significant $\chi^2 = 23.369$ and p-value = 0.000.

Association between income and preventive behavior found statistically significant $\chi^2 = 8.733$ and p-value = 0.032. Regarding to income, Respondent with low income, mostly students, had pocket money from their parents and unemployed possessed low preventive behavior. However highest preventive behavior was seen in respondents earning between pkr 10000 to 20000.

Government officers possessed the highest preventive behavior amongst the other occupation and particularly the laborer group including farmers who were the lowest. Others including students and housewives stood second for high preventive behavior followed by businessmen and laborer. Association between occupation and preventive behavior found statistically significant $\chi^2 = 8.934$ and p-value = 0.030.

The results showed that association between marital status and preventive behavior did not find statistically significant $\chi^2 = 1.476$, p-value = 0.78.married respondents were more preventive towards HIV/AIDS as compared to unmarried. (table 13)

4.10 Associations between knowledge and preventive behavior towards HIV/AIDS

Table 14 Association between and knowledge and preventive behavior

Level of knowledge	Preventive behavior			
	High		Low	
	(n)	(%)	(n)	(%)
High	52	83.87	38	43.18
Low	10	16.13	50	56.82

$\chi^2 = 25.092$ p –value = 0.000

Results indicate that there was an association between respondent's knowledge and their preventive behavior towards HIV/AIDS prevention. The chi-square test showed that there was statistically significant association between knowledge and preventive behavior , $\chi^2 = 25.092$ p-value = 0.000.The respondents who had high level of knowledge had high preventive behavior with 83.87 percent, as compared to those had lower level of knowledge but high preventive behavior 16.13 percent.(table 14)

4.11 Associations between attitude and preventive behavior towards HIV/AIDS

Table 15 Association between Attitude and preventive behavior

Level of attitude	**Preventive behavior**			
	High		**Low**	
	(n)	**(%)**	**(n)**	**(%)**
High	42	67.74	27	30.68
Low	20	32.26	61	69.32

$\chi^2 = 20.112$ p –value = 0.000

The respondents with high level of attitude and had high preventive behavior were 67.74 percent, as compared to those had lower level of attitude and had low preventive behavior were 69.32 percent. Results indicate that there was an association between respondent's attitude and their preventive behavior towards HIV/AIDS prevention. The chi-square test showed that there was statistically significant association between attitude and preventive behavior, $\chi^2 = 20.112$ p-value = 0.000.(table 15)

4.12 Association Between perception and preventive behavior

Table 16 Association Between and perception and preventive behavior

Level of perception	Preventive behavior			
	High		Low	
	(n)	(%)	(n)	(%)
High	40	64.52	30	34.09
Low	22	35.48	58	65.91

χ^2 =13.528 p –value =0.000

Results indicate that there was an association between respondent's perception and their preventive behavior towards HIV/AIDS prevention. The chi-square test showed that there was statistically significant association between perception of severity and preventive behavior , χ^2= 13.528 p-value = 0.000.The respondents who had high level of perception had high preventive behavior with 64.52 percent, as compared to those had lower level of perception and low preventive behavior 65.91 percent.(table 16)

CHAPTER V
DISCUSSION CONCLUSION AND RECOMMENDATION

5.1 Discussion

With the emergence of the AIDS epidemic, soon it became evident that HIV was much more than just a disease. Not like other disease, HIV not only touches the lives of those infected, but it also impacts the lives of virtually everyone on earth. It would be hard to find any group not affected by the HIV epidemic in some way. Probably HIV/AIDS is the most important public health issue of our time. The best and most important and single way to constrain from this disease are to practice preventive measures. It is necessary to access the factors which have influence on preventive behavior of different people belonging to different regions of globe.

This study was carried on dental patients who attended dental section Sandeman Provisional Hospital Baluchistan, Pakistan.150 patients were included in this study and they completed self administrated questionnaire, illiterate patients were interviewed and the questionnaire were filled by researcher. However this study cannot be generalized to whole population of Baluchistan, but it can represent the preventive behavior trend of Baluchistan province as patients come from all over Baluchistan to this provisional hospital.

5.1.1 Socio-demographic characteristics

In this study majority of respondents were young and below age of 40 years. . It is obvious from result that there is a percentage decline from young to old age, which shows awareness and consciousness among young generation about oral hygiene health. One other reason may also count for this that old patients find it difficult to go to hospitals as they more dependent on other people, but for young people it is easy to move around.

Male respondents were more in number than female. This is because it is easy and convenient for males to travel from rural areas to center and it is also difficult to convince females for dental treatment as they are afraid of dental treatments. Majority of respondent were Muslims with as Pakistan is a Muslim country. Married were in majority as compared to unmarried respondents, as traditionally in Baluchistan people get married in early age. Divorced were few because divorce is culturally unacceptable in Baluchistan.

Increased numbers of respondents attended university and college as compared to respondents who were illiterate. Two reasons as most of respondents were male which are more educated than females and there is also trend of education in new generation, as a major age group of respondent was young.

Regarding occupation, government officers were highest as compared to lowest. This not because that government officers are more than farmers in Pakistan, but government officers are educated as compared to illiterate and unawared farmers and more concerned about their oral health. Others which were mostly students were also in good numbers as they are conscious about their oral hygiene.

Majority of respondents income was less than 5000 per month, included students who got pocket money from their parents, cheap labors whose per day wage is about pkr 100 and unemployed people who are supported by relatives or friends. Followed by respondents whose income was between pkr 5009-9000, were mainly low levels of government servants, farmers and high skilled laborers.

5.1.2 Level of knowledge of respondents on HIV/AIDS

Majority of respondents showed high level of knowledge about HIV/AIDS which might of mainly two reasons, firstly, most of the respondents were young, easy for them to conceive and understand matter easily. Secondly, most of the respondents were highly educated from university and college, which count for their good knowledge. However appreciable numbers of respondents were with low level of knowledge, factors like no education, old age, occupations like farmers and laborers may result in low level of knowledge.

Most of the respondents knew that what is AIDS and HIV as its causative agent, which is a positive figure but consideration should also be given to those, who had no idea of AIDS in this modern era of information. Majority of the respondents have good knowledge about mode of transmission, like contaminated instruments, blood transfusion and sexual intercourse. Misconceptions about HIV/AIDS transmission was also found among few of the respondents like it can transmit by touching a HIV positive person, through coughing, Drinking in same glass and eating together. However a great misconception was found about transmission through blood contact which researcher already cleared the respondents, that it doesn't mean blood transfusion but touching the contaminated blood by bare but healthy hand. Respondents were well aware, that AIDS cannot be cure yet and most of them also knew that a person may look healthy and also having HIV at same time.

As this study was done on dental patients and general population but most of respondents were young and educated, and if its results are compared to studies which are done on specific population like a study done by (Farid R, 2003) on knowledge about HIV/AIDS among female students in Punjab province [20], more or less common results were found among both studies as students are more aware and had good knowledge of HIV/AIDS. But we will find total different results by comparing to a study done by (Emmaneull, 2004) on HIV risk behavior and practices among heroin addicts Lahore, Pakistan.[22] ,as majority of respondents had poor knowledge about HIV and its transmission.

However from above discussion, it is evident that people have sound knowledge about HIV/AIDS and its mode of transmission but misconception persists in some area because most of people compare AIDS with other airborne or waterborne diseases, which may result in development of un intentional discrimination against HIV positive people.

5.1.3 Level of attitude of respondents towards HIV/AIDS

Attitude is a complex mental state involving beliefs and feelings and values and dispositions to act in certain ways. While accessing the attitude of dental patients towards HIV/AIDS prevention, it was revealed that large number of respondents strongly believed that use of sterilized instruments in dental clinic and

making sure that instruments are properly being sterilized can protect them from HIV/AIDS. These results are almost same which found in another research done by Farid .R on female students in Punjab province ,which said that Sixty-eight percent and seventy two percent students respectively held the view that avoiding used needles for injections in hospitals and laboratories for screening blood or blood products can prevent AIDS.[20] Majority of respondents know the consequences of using unsterilized instruments and said that they would never take a chance of being treated with unsterilized instruments. Few respondents were negative with the idea of not having sex with their partner, if they have the feeling of having HIV.

Education, knowledge and exposure more or less reflected in some one attitude, as most of respondents were male and highly educated and also had a good occupation and pay, the figures for strongly believe and believe are high and acceptable. But considerable amount of respondents were not sure about lot of questions which resulted in overall high percentage of low preventive behavior of respondents towards HIV/AIDS.

5.1.4 Level of perception towards HIV/AIDS

Perception of an individual develops by its surroundings, thoughts, exposure, and knowledge and also that how a person is conscious about something. How much an individual takes something serious, with what point of view and how a person observes something and interprets it? One should also keep in mind that it is not necessary that one's perception always reflects in his behavior

While determining the level of perception that how much respondents perceive HIV/AIDS as a risk and threat to themselves and their family, it was concluded that majority of respondents were agreed that , one cannot cure if once infected with HIV, and will ultimately die from it's complications. Majority of respondents severely considered AIDS as a threat to their lives and believed that one should always be treated with sterilized instruments in dental clinic. Appreciable amount of respondents considered dental clinic a potential place for HIV infection.

As already discussed that majority of respondents were degree holders with good occupation and income, which may reflect in their perception, the figures for strongly, agree and agree, are in acceptable ranges. Percentages for high level for

individual questions are high but overall percentage of perception level is low, because considerable percentages of individuals were unsure about questions.

5.1.5 Source of information on HIV/AIDS

Television seemed to be a main source for information on HIV/AIDS for respondents. Two reasons count for this, firstly majority of people are fan club of television and they spent most of their free time in watching TV and government runs most of its health public commercials mainly on TV. Second source was newspaper and leaflets; majority of Pakistani people first job in morning is to read news paper, as they seem to be addict to it .Newspaper is also another major source for advertisement for government programs. A good portion of project budget is always spent on information leaflets to provide necessary information to people, if distributed properly, prove to be good source of information service.

According to a survey in 2000, 35% of the population possessed a radio (37% urban, 34% rural) and 46% owned a television set (67% urban, 37 rural) indicating a 70% increase in TV ownership over three years, with no change for radio during this period. The trend towards television ownership is not limited to urban areas; availability of radio is now less than that of TV even in rural areas.[18] Another study conducted in 2002 to assess the KAP of the people in response to the AIDS awareness campaign showed that television viewing at home is higher in both rural and urban areas than radio or print media.[19]

Doctors didn’t show any positive role in information dissemination, which shows their attitude towards distribution of HIV/AIDS information. They seem to be least bother about prevention of such deadly disease or they are overwhelmed by their clinic load. Baluchistan has a very conservative cultural society and talking about sex among family has no place. Friend’s role in information distribution was not satisfactory, which reflects their attitude towards their health, having conversations on anything but not on their health issues. Radio also didn’t play any significant role, as radio lost its popularity with advent of television. Only few old fans of radio left, who listen special programs like BBC news and some music programs.

5.1.6 View of respondents on HIV/AIDS information

Majority of respondents agreed that AIDS information is necessary, as they know the importance of this fatal disease. Most of respondent found information available on HIV/AIDS inadequate, they are right as majority of respondents got information on HIV in more than one year. Few of respondents said that they are not interested in gaining HIV/AIDS knowledge at all. It might be due to wrong interpretation of Islamic teachings which say that whatever is in faith it will come in anyway. So they are not concerned about AIDS, even some of doctors didn't vaccine themselves against hepatitis B in accordance with this faith.

5.1.7 Preventive behavior of respondents towards HIV/AIDS

Preventive behavior of respondents is the efforts which are done or practiced by them to prevent themselves from risk of getting HIV/AIDS. Although individual actions contribute to preventive behavior, but is not totally volitional .There is not only one theory or concept to understand and describe the influence and effect of different factors related to development of preventive behavior.. To determine the preventive behavior of dental patients, several social and cultural factor like age, income, religion occupation, and psychological factors like attitude, knowledge and perception were studied. This study concluded that majority of respondents had low level of preventive behavior.

While accessing the preventive behavior, Majority of respondents asked doctor about status of sterilized instruments last time in dental clinic, because it is easy to ask verbally and get satisfied. But not that much of respondents practically tried to conform that instruments are properly being sterilized. Some patients hesitate to walk around in dental clinic and check everything which might doctor himself does not like, so patients compromise their health on disliking of doctor. However it is very difficult to check sterilization status in public hospitals. Some patients belong to poor background, are uneducated and not aware of their basic rights, are afraid and unconfident to ask or demand anything in hospital, they take any treatment as granted. However considerable number of respondents rejected to take treatment from unsterilized instruments, as it came in to their knowledge.

Majority of respondents have never talked to their partners about HIV/AIDS .In Baluchistan, there is no concept of boy and girlfriend, here partner mainly meant married couple. But even being couple only small number of respondents had discussed preventive measures about AIDS to their partners. For a female partner is very much difficult to talk about HIV to his husband due to cultural morals and also they shy to. Husbands do not want to put themselves in suspicious condition and avoid talking about HIV. They also don't find it needful to talk to their partners, as they are confined to one partner and have blind faith between them.

Majority of respondents never tried to take proper knowledge about HIV/AIDS, which show their lack of interest or some of them think that they have already enough knowledge about AIDS. These socio-cultural factors may bring the majority of respondents to have low level of preventive behavior, which is shown in this research.

5.1.8 Association between socio-demographic characteristics and preventive behavior

As the analysis in chapter 4 showed a strong relationship between occupation and preventive behavior. Government servants which are mostly degree holder, well educated, having fine income and well exposure to world showed high preventive behavior with. They are more conscious about their health and try to practice preventive behavior as much as possible. On other hand laborer group including farmers showed lowest preventive behavior. Reason is that, no education, no awareness, low income and no exposure and even most of farmers don't know that what is AIDS, then how one can expect any preventive measures in their behavior. However, few of laborer and unemployed respondents may be literate but may lack proper AIDS preventive information and also some unfavorable condition like low income, domestic tension for unemployed people and work load for laborers results in an unprotective behavior.

The results of this study are more or less same as compared to another study which was done by Gul.M.B on Knowledge of Jail Inmates of Central Prison, Larkana, Pakistan, Regarding HIV/AIDS & STIs, where eighty six percent of prisoners belonged to rural area ,where majority of people are farmers ,laborers and

uneducated. The study results show that high percentages of respondents do not know how HIV/AIDS does not spread; while those who had a partial knowledge were 21.2%, and those who completely knew about HIV/AID were only 7.7%.[21]

A strong association was found between education and preventive behavior. Respondent with high education are more likely to have high preventive behavior. Educated people can understand, perceive, and catch better anything from an uneducated thing. Educated people have more chance to interact with world in terms of occupation, income, society and learn more about things. Exposure to world and different society make them more conscious about their health. As mentioned earlier newspapers and leaflets are one of major source of AIDS information, that illiterate people cannot read and even on television, the understanding capacity of an uneducated person is lower than educated one.

Third socio- demographic factor was income which showed association with preventive behavior. respondent who having less then pkr 5000 per month mostly included unemployed, students who getting money pocket from their parents and house wives , Showed high low preventive behavior with 37.50 percent. However students cannot be classified as uneducated and unexposed but they also had a good AIDS knowledge; reason for their low preventive behavior seems to be the exciting young part of age, where someone rarely bothers about something. Unemployed as discussed earlier are passing through social crisis and depression of unemployment, which resulted in an unprotective behavior. Housewives usually get married in their early age, with in complete education and confine to homes, gives reasons for their low preventive behavior.

Highest preventive behavior possessed by respondents earning between pkr 10000-20000 per month, again majority of them are government officers which have enough education and knowledge about HIV/AIDS .however respondents who have earning more then pkr 20000 have higher low preventive behavior, It might of uneducated businessmen who do not have proper knowledge of HIV/AIDS.

5.1.9 Association between knowledge and preventive behavior

Analytical results showed a strong relationship between knowledge and preventive behavior of respondents. This association can be justified as that most of respondents had a good knowledge of AIDS, its cause, how can it be transmitted, what are risks and what are misconceptions, obviously if they implement this knowledge in their daily life routine, they will definitely possess a high level of preventive behavior as compared to people who have low knowledge.

5.1.10 Association between perception and preventive behavior

A strong association was found between level of perception and preventive behavior. Number of respondents who possessed low level of perception and low preventive behavior were high.

Perception is individual's art of conceiving something. Perception for same thing varies from one individual to other. Some people conceive all matters concerned to their lives seriously and highly remain conscious about them. Respondents who perceive HIV/AIDS as a serious threat to them and their families, who acknowledge the importance of this disease, conceive it as deadly disease and take its complications as life threatening, and bring them in practice while dealing with HIV/AIDS risk conditions like dental treatment, eventually develop high levels of preventive behavior. Education, knowledge, and occupation play an important role in development of perception values. Percentage of respondents with low level of perception and low behavior was high, which might be because of occupation like laborers, farmers, businessmen and unemployed people, who lack proper knowledge about HIV/AIDS, and couldn't develop high level of perception, eventually resulting in low level of preventive behavior.

However consideration should also be given to those respondents who had high level of perception but low preventive behavior. It might be because of some reasons like some people perceive AIDS as a life threatening disease and they think that it's good to talk about AIDS to their life partners but hesitate to talk. Some respondents believe that dental clinics are potential places for HIV/AIDS, but while having procedures there, they do not question the doctor about sterilization, which they think might be unpleasing for dentist.

5.1.11 Association between attitude and preventive behavior

Result from chapter 4 showed a strong relationship between attitude and preventive behavior of respondents. Those who had low level of attitude and possessed low level of preventive behavior were high in count.

Respondents who believed and developed consistent values, that adopting certain practices in their life will protect and make them safe from risk of various diseases, developed high level of attitude. Believes like use of sterilized instruments in dental clinic can protect them from HIV/AIDS, never take a chance to be treated with unsterilized instruments and avoiding sex with their partner if they believe that they have AIDS and bringing them in practice will result in development of high level of preventive behavior. Knowledge, occupation and income also play an important role in someone's attitude.

Percentage for respondents with low level of attitude and low preventive behavior was high, respondents who were laborer, farmers ,businessmen ,and housewives who are mainly uneducated and never exposed to HIV/AIDS knowledge and who had low level of perceptions, finally reflected in their preventive behavior.

It is not necessary that if someone has high level of attitude, should also have high level of preventive behavior, as considerable number respondents had high levels of attitude but with low preventive behavior .some people have high values and believes in their attitude but sometimes they deliberately don't use them in their daily life, or sometimes might avoided due to unfavorable conditions.

5.2 Conclusion

This study was carried out to determine the psychosocial factors related to the preventive behavior of dental patients towards HIV/AIDS at dental section Sandeman Provisional Hospital Quetta, Pakistan. Study included male as majority of respondents with, among 18-40 years of age group and were mainly Muslims. Association was found among three socio-demographic factor education, monthly income and occupation with preventive behavior.

The study concluded that majority of the respondent showed a high level of knowledge about HIV/AIDS but in some areas regarding mode of transmission, respondents have some misconceptions.

Study results showed that number of respondents who had low level of attitude and perception and who had low level of preventive behavior was high. Television remained the main source of information distribution along with newspaper and leaflets. Other sources like friends, family and doctors didn't prove any significant role. Few numbers of respondents got updated within 3 months and majority of respondents did not get information within whole year.

From the analysis, it is concluded that majority of respondents showed low level of preventive behavior which seems to be continuation of high number of respondents who got low perception and attitude levels. However, findings revealed that considerable amount of respondents who possessed high level of knowledge, perception and attitude but showed low level of preventive behavior.

5.3 Recommendations

Based on research findings, following recommendation are suggested

5.3.1 Results indicate that considerable amount of respondents which mainly belonged to occupations like farmer ,laborer ,business and unemployed were with low level of knowledge .which resulted in their low levels of attitude and perception and ultimately in their low level of preventive behavior. Special consideration should be given to the thinking mentality of these groups while disseminating AIDS education. Providing leaflets or other materials are not enough but methods like group discussions, local AIDS preventive trainings, and AIDS awareness programs should be promoted in rural areas as well as on television. Local leaders, head of villages and religious clerics should also be taken in confidence to promote and encourage people to take interest in AIDS prevention education.

5.3.2 Special attention should be given to the question that why respondents with high levels of knowledge, attitude and perception but show low levels of preventive behavior. Group discussion and meeting with health personals

would help to find out the factors, which hinders the reflection of perception and attitude in their preventive behavior.

5.3.3 Some misconceptions and misunderstating are still presents about the transmission of HIV/AIDS, which develops a picture of unintentional discrimination against HIV positive people. To arrest these misconceptions, highlighted areas of misconception and false beliefs should be specially focused in AIDS education curriculum.

5.3.4 Study revealed that only television and newspaper remained main tool of information dissemination. Other important sources like doctors, friends and family members didn't prove helpful. Doctors should be approached, requested and convinced that they can be very helpful in arresting HIV/AIDS spread, by educating their patients about AIDS preventive measures. Behavioral change among young age group requires an active involvement in participatory approaches, like skill trainings, role-plays, group discussions and case studies. Special informative programs and group discussions should be held for family heads and should be encouraged to talk about HIV preventive measures and make them aware of their productive and indispensable role in combating AIDS spread.

5.3.5 There should be HIV/AIDS information centers in each and every department of hospitals, so people can take advantage of these centers and learn more about HIV/AIDS. Consideration should be also given to mobile information teams, so they can visit different places around the area and provide important knowledge to people.

5.3.6 Due to some limitation like shortage of time, funding, this study couldn't be done on full scale. In order to have more and useful information on this study population, further research may be carried out, particularly increasing the sample size and using large catchment area.

5.3.7 At the end of this study, it was felt that self administrated questionnaire is not enough to access and understand the actual values of behavior. A standard interview questionnaire may be used in future studies to reveal someone's set standards for preventive behavior.

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APPENDIX

QUESTIONNAIRE

PSYCHOSOCIAL FACTORS RELATED TO BEHAVIOR OF DENTAL PATIENTS TOWARDS HIV/AIDS PREVENTION.

Please put the correct number in the ☐ with required information about yourself. Your record will be kept confidential and anonymous.

ID number: _____

Part 1: Socio – Demographic Characteristics

1. GENDER ☐
    1. Male
    2. Female

2. RELIGON ☐
    1. Islam
    2. Christian
    3. Hindu
    4. Others (please specify) …….

3. AGE ☐
    1. 18-27
    2. 28-37
    3. 38-47
    4. 48-57
    5. More than 57

4. MARITAL STATUS ☐
    1. Married
    2. Unmarried
    3. Divorced
    4. Widow

5. MARRIAGE DURATION ☐
    1. < 5 years
    2. 5 - 10 years
    3. > 10 years

6. EDUCATION ☐

    1. No education
    2. Primary school
    3. Middle school
    4. Secondary school
    5. Degree

7. OCCUPATION ☐

    1. Farmer
    2. Businessmen
    3. Government officer
    4. Laborer
    5. Unemployed
    6. Others (Please specify) …….

8. PERSONAL INCOME/MONTH ☐

    1. Less than 5000
    2. 5000 – 9999
    3. 10000-19999
    4. More than 20000

Part 2: Knowledge about HIV/AIDS

9. Do you know that what is AIDS? ☐

    1. YES
    2. NO

10. Cause of AIDS is HIV virus ☐

    1. YES
    2. NO

QTS		YES	NO
11.	How HIV/ AIDS is transmitted?		
11.1	By blood contact		
11.2	By contaminated instruments		
11.3	By Mosquito bite (after biting a HIV positive person)		
11.4	By blood transfusion		
11.5	By touching an HIV positive person		
11.6	By sexual intercourse		
11.7	By using the same drinking glass, used by HIV positive person.		
11.8	By eating together with HIV positive person		
11.9	By Can be transmitted through coughing		

12. Which one is better source to recognize HIV infected person? ☐

1. By testing blood
2. By testing urine

13. At present time, AIDS has cure? ☐

1. YES
2. NO

14. A person may look healthy and have the AIDS virus at same time? ☐

1. YES
2. NO

Part 3: Perception about Severity and Susceptibility towards HIV/AIDS

PLEASE MARK (✓) BELOW IN YOUR CHOICE

QTS		STRONGLY AGREE	AGREE	NOT SURE	DISAGREE	STRONGLY DISAGREE
15	Do you think that one can't be cured, if infected with HIV?					
16	Do you think that one can die from AIDS complications?					
17	Do you think that being infected with HIV is dangerous?					
18	Do you think AIDS is a severe threat to you and your family?					
19	Do you think that you should be treated by sterilized instruments in dental clinic?					
20	Do you think that you might get HIV while being treated in dental clinic?					

Part 4: Attitude towards HIV/AIDS Risk

PLEASE MARK (✓) BELOW IN YOUR CHOICE

QUESTIONTS		STRONGLY BELIEVE	BELIEVE	NOT SURE	DO NOT BELIEVE	STRONGLY DO NOT BELIEVE
21	Do you believe that using sterilized instruments in dental clinics can protect you from being infected with HIV/AIDS?					
22	Do you believe that its good to make sure that instruments are sterilized before being used on you?					
23	Do you believe that you should never take a chance of being treated by unsterilized instruments?					
24	Do you believe that its better to avoid sex with your wife, if you feel that you are infected with HIV?					

Part 5: Preventive Behavior towards HIV/AIDS

PLEASE MARK (✓) BELOW IN YOUR CHOICE

	QUESTIONTS	YES	NO
25	Did you ask for sterilized instruments in dental clinic last time?		
26	Have you ever talked about HIV/AIDS prevention to your partner?		
27	Have you ever tried to make sure that instruments are being sterilized properly?		
28	Have you ever rejected to take treatment by unsterilized instruments?		
29	Have you ever tried to take proper knowledge about HIV/AIDS?		

Part 6: Information about HIV/AIDS

30. What is the main source of your information about HIV/AIDS? ☐

You can select more than one

1. Television 2. Radio 3. Newspaper, leaflets
4 .Family 5. Friends 6.Health personals
7. Doctors 8. Others (please specify) …….

31. Do you think that HIV/AIDS information is necessary? ☐

1. YES
2. NO
3. NOT SURE

32. Do you think sufficient information is available about HIV/AIDS? ☐

    1. Adequate
    2. Not adequate
    3. Not sure

33. How often do you receive information about HIV/AIDS? ☐

    1. Every 3 months
    2. Every 6 months
    3. More than 1 year

34. Are you interested in gaining information about HIV/AIDS? ☐

    1. Very much
    2. Not that much
    3. NO

BIOGRAPHY

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