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Socio-economic factors causing HIV/AIDS in Quetta Balochistan:

By

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Abstract:

This study analyzed the “socioeconomic factors causing HIV/AIDS in Quetta, Balochistan”. The data and information required were collected from 100 HIV/AIDS registered patients. Questionnaire and key informant interviews were used to collect primary data. Secondary data was gathered from reputable published books, journal articles and websites. Data was analyzed through Statistical Package for Social Science (SPSS). Initially descriptive statistics was used such as, frequency distribution and percentages. Later, the linear regression model was applied to understand the socioeconomic factors hypothesized to have been causing HIV/AIDS. The findings of this study revealed that the blood transfusion was significantly associated with HIV/AIDS. A large proportion of the population (77%) had blood transfusion. The study exposed that an overwhelming majority (71%) of patients were unaware of factors responsible for the transmission of HIV/AIDS. The frequency of unsafe sexual intercourse was 69% in the study area. Unsafe sexual intercourse was highly significant. Most of HIV-AIDS patients had injected used syringes, and consulted quacks; made tattoos on their body, shared razors and had circumcision at quacks’ so-called clinics. To overcome the HIV/AIDS, the government of Pakistan and Balochistan including the concerned organizations (WHO, Health Ministry and Department) need to raise awareness among people on emergency basis, via social, political and religious institutions. Similarly, awareness creation among HIV/AIDS patients about their treatment and rehabilitation is must. There is an urgent need to establish treatment and rehabilitation centers at provincial and district level.

Keywords: HIV/AIDS; Socio-economic conditions; Causes; Quetta; Balochistan

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Introduction:

Human immunodeficiency virus is belonging to lentiviruses which causes acquired immunodeficiency syndrome. Two types of HIV viruses are there, named HIV1 and HIV2. And both are transmitted through sexual relations, blood products and from parents to their children especially from mother to child. HIV2 is comparatively less transmitted than HIV1. The time of early infection and disease is fast in the case of HIV1 throughout the world (Khan 2006). In addition, the cause of HIV is under publication in Pakistan which placed IDUS at 3.5% during 2004-05. (UNAIDS, 2005; UNICEF 2005). Moreover, many blood donors are IDUS in Pakistan who donate or sale their blood without screening. Only 50% blood is tested for HIV (Oyedunni and Adesoro, 2009). 43 million individuals were suffering from HIV/AIDS. The people getting antiretroviral therapy were only 21million in 2017 (UNAIDS 2017). HIV/AIDS does not remain a health issue any more. It is a security problem as many people are at the verge of extermination. The incidence rate is multiplied by poverty, disease, lack of health facilities and unemployment (Bhurgri 2006) As per the government records 622 HIV and 321 AIDS cases are in Pakistan. (Bashir, 2006). According to UNAIDS the concern of HIV is under publishing in Pakistan. There are 70000 to 80000 HIV patients in Pakistan. However, as per the national AIDS control program 83468 people are living with HIV and 7568 are registered in eighteen HIV centers by the end of 2013 (NACP, 2014).

Social Factors Causing H.I.V:

Intravenous Drugs:

Intravenous drug is one of the key drivers of the worldwide HIV pandemic. In several components of Asia, Eastern Europe, Africa and Latin America, unsafe injecting drug use is additional and additional impacting on HIV transmission. Approximately 10% of all HIV infections occur through sharing Injecting equipment (international Aids conference, 2014). The load of HIV disease among IDUs is vital and growing. There are or so sixteen million IDUs worldwide, with a calculable three million living with HIV (US PEPFAR, 2010). In addition, illegal use of drug mostly injecting heroin has been associated with the HIV/AIDS. The drugs addicted are easily affected by injecting drugs. Injection of drug is prevalent in society and it is realized that injection of drug is main cause of HIV while it is transmitted to sex partner during intercourse. Moreover, the misuse of drug is recognized for sexual purposes which develop sexual desire and affect the user itself and the sex partner too. (NIDA, 2012).

Blood Transfusion:

The blood transfusion through the virus affected instruments also increases the chances of risk to others. Studies indicated that 90% patient of HIV were infected by blood transfusion. (Donegan, et al., 1994). This illness is a growing concern to health in Pakistan. There is no supervision, over the blood donors or institutions that may provide the comprehensive knowledge to blood donors' to in country. (UN, 2016). Although, the main risk factors of HIV infusion is the blood transfusion in Pakistan .A report revealed that the blood donors of Pakistan were compared with foreign countries donors ,showed that the spreading of HIV ,0.13% in Pakistan ratio were less than from china in 2014 (0.31%) Nepal, 2009 (0.21%) similarly Nigeria in 2008(2.8%).However, it was higher than India in India reported just 0.1%, Iran 0.0054% comparatively .the diversities of this rates may depend on their safety measures implemented by them. (Waheed, et al., 2017).

HIV as a Sexually Transmitted Disease (STDs):

According to report published by (CDCP US, 2001) most of the affected patients of HIV/AIDS are of homosexual background while it is very less founded in heterosexual people. Moreover, it is recognized that the HIV/AIDS is easily transmitted through anal sex than the vaginal sex. In addition, transmission of HIV/AIDS is closely associated with heterosexual sex such as engaging in anal sex, presence of sexually transmitted disease, having more than one sexual partner and use of drug during sex. (Fleming, et al., 1999).

Homosexuality Casues HIV/AIDS:

In the beginning of the pandemic, the incidence of HIV disease among MSM in the epicenter in the United States peaked at a soaring of 8 to 10% per year (Griensven, et al., 1993) and then jumped down to below1% in the late 1980s and early 1990s (Steketee, et al., 2002). Continuously through this period, the major sexual threat behavior for HIV disease among MSM has been uncovered anal contact with higher risk linked with open intercourse in contrast of insertion intercourse (Chmie, et al., 1987). Additionally, on average, 35,000 new cases are verified each year. The main threat of this infection among young men whose ages (15–24 years) was sexual in 1990 to 2010, mostly were homosexual. An increase was reported in the cases of homosexuality (sex between the same gender specially men) (MSM), from 25.2% in 1990 to 46.4% in 2010(BMDRS, 2011).

Economic Factors Causing HIV:

Poverty and HIV/AIDS:

According to (Magadi, 2011) socioeconomically deprived people consisting women are excessively affected by HIV. Moreover, poverty is a causing factor for HIV (Masanjala, 2007). Poverty may restrain people from secure practices such as use of condom and other risky sexual behaviors (Gillespie, et al., 2007). In addition, in sub-Saharan Africa the wealthier ones are more likely to be HIV positive compare to poorer. Summing up, the data from sub Saharan Africa shows heterogeneity in quantity and direction of poverty and HIV (Fox, 2012).

Migration as a Risk Factor for HIV:

Many case studies are unanimous on the migration being a factor causing HIV/AIDS (Ateka, 2001; Brummer, 2002). Most of the migrates have regular sex partners while these peoples migrate to other areas to ensure their livelihood/ income. During the same time, they may engage in sex with prostitutes to fulfill their sexual desires which in return affect the migrant (Anarfi, 1993). Most of the registered patients of HIV in Pakistan are worker abroad mostly in middle east, upon their return they transmit the disease to their regular sex partners (Khan, 2006).

Barber Shops and Beauty Parlors:

Medical Factors Causing HIV:

The shaving method also an alarming threats to transfusion of HIV which have been reported in many Asian countries and Africa. (Zuwedi, et al., 2002; Ibrahim et al., 2007). Moreover, accidental cuts on skin by blade, unhealthy practices, as well as little disinfection rates of re-useable instruments. Suitable, efficient and steady sterilization of instruments for shaving procedures are important to curb of HIV spread in barbershops. HIV infected individuals, despite being symptomatic, are infective at all phases of HIV/AIDS infection. That is why, when clients are dealt, barbers' instruments must be sterilized to lessen the risk of HIV (Oyedunni and Adesoro, 2009).

Surgeons and Patients:

Human Immunodeficiency Virus (HIV) and hepatitis, indicates a great job-related threat for health care workers (Becker, et al., 1989). Surgeons and health care worker have been revealed to have high rates of contact to blood amongst health care professionals (Heald and Ransohoff, 1990). Constant professional disclosure makes the hazard of disease transmission to surgeons greater than the risk of transmission to patients though blood-borne pathogens may be transfer to either way

(Price, 1990). The sorts of disclosure also influence the risk of transmission; sharp injuries have the utmost risk of ailment transmission (Rosenberg et al., 1989). Furthermore, comparatively hollow needles may be more probably to result in seroconversion than to solid needles, because they pass on higher inoculums of blood (Gerbert, et al., 1990).

Mother-to-child Transmission:

Vertical transmission (Mother-to-child transmission) (MTCT) of HIV is the main course of transmission through which children get HIV virus worldwide around 390000 children were recently infected by HIV in 2010 (Szwarcwald, et al., 2008). In 2008, a predicted 1.4 million child bearing women were living with HIV in developing countries gave birth, out of which 91% of live in sub-Saharan Africa (UNAIDS, 2009). The occurrence of window period and motherly antibodies make it impossible to ascertain either the infant has infected during delivery or after it through breastfeeding (Newell, 1998; Bobat, et al., 1997).

Prevention Strategies:

There are multiple strategies can reduce the propagation of HIV. These include firstly, educating people about sex avoiding the risk factors, through the use of mass media. Secondly, awareness among the barbers over the use of sterilized instruments require in barber shops. And the third is proper treatment of affected patients and awareness to prevent the spread of fatal diseases (Hashimoto, et al., 2002).

Treatment of HIV:

The patients visit clinics monthly for getting new dose and to consult the physician about their symptoms. Medicines are toxic which are used in the treatment. It is necessary to check the side effects and effectiveness of medicines. The effectiveness depends upon the adherence. HIV patients are mostly suffering from depression who need counseling and follow up. The medicines of HIV may be prescribed with other medicines. (Medeiros, et al., 2002).

Study Area:

Quetta is the capital city of Balochistan. Quetta is the most populous city of Balochistan. According to census (2017), its population is 1.001 million. The national AIDS control program articulated that the number of HIV/AIDS registered patients in Quetta is comprised on 750 persons (<http://www.bacp.gob.pk>, 2018). Health department Balochistan established two AIDS control centers in Quetta and Turbat in order to provide treatment to patients of HIV/AIDS. Moreover, Non-Governmental Organizations (NGOs) like RAHNUMA Family

planning association of Pakistan and Legend Society are also working in Quetta district to control HIV/AIDS. RAHNUMA Family planning association of Pakistan is working on female sex workers (FSW) providing free diagnostic services and carrying out referral services. Similarly, the legend society is one of prominent organizations providing services to Injected drug users and HIV/AIDS patients. Legend society also diagnoses and makes referral services to the HIV/AIDS positive patients. Both the organizations refer the HIV/AIDS positive patients to the provincial AIDS control program where free treatment is provided.

Methodology:

This is a descriptive and explanatory type of research. The issue is highly developed and many studies have been conducted on the HIV/AIDS. The study explains the socio-economic conditions of people entailed with the factors causing HIV/AIDS, in Quetta, Balochistan. Simple random sampling technique of Probability Sampling was applied in the research. In this regards, 100 registered HIV/AIDS patients were sampled from Legend Society, for the study. The Legend Society, a nation NGO-is working in Balochistan on the prevention and rehabilitation of HIV/AIDS. Data was analyzed through Statistical Package for Social Science (SPSS). Initially, descriptive statistics was used such as, frequency distribution and percentages. Later, the linear regression model was applied to understand the socio-economic factors, hypothesized to have been causing HIV/AIDS in Quetta.

Results:

Respondent's Socioeconomic Conditions:

The results showed that 94% of respondents were male and 6% female. The average age of the respondents was 34.5 years. Furthermore, the findings of the study revealed that 27% of respondents were illiterate, 9% with the primary education, 24% secondary, 18% intermediate and 18% had completed their graduation (14 years of education). Only 11% of respondents were single and overwhelming proportion 89% of respondents were married. The findings of the study revealed that 1% of the respondents were students, 9% Government servants, 39% self-employed, 21% farmer and 30% truck drivers. The average household annual income of the respondents was Pakistani rupees 485,600/- (Table.1).

(Table 1) Respondents' Profile

Description	Frequency	Percentage
Gender of respondent		
Male	94	94.0
Female	6	6.0
Total	100	100
Education of respondent		
Illiterate	27	27.0
Primary	9	9.0
Secondary	24	24.0
Intermediate	18	18.0
Graduation	22	22.0
Total	100	100
Marital status of respondent		
Single	11	11.0
Married	89	89.0
Total	100	100
Profession of respondent		
Students	1	1.0
Government servant	9	9.0
Self employed	39	39.0
Farmer	21	21.0
Truck driver	30	30.0
Total	100	100

Field survey, 2018

The results showed that 11% of HIV/AIDS patients existed in the household of respondents. It means that in 89% household, respondents were the first ones having HIV/AIDS positive status. In addition, the findings of the research illustrated that 59% of the patients were unaware about HIV/AIDS causing factors. Similarly, the finding revealed that 77% of respondents had blood transfusion. Blood transfusion is the factor which causes HIV/AIDS rapidly. Furthermore, the results showed that almost all the respondent had done circumcision. The frequency of the male respondents was 94%. Moreover, the findings demonstrated that 69% of the respondents had unsafe sex and just 31% used condom while having sex. In the same way, 22% of the drug user shared syringes with others while 62% of the respondents had consulted quacks. Moreover, the findings also revealed that 35% of the respondents had travelled to UAE and African countries.

The linear regression model was found best fit to determine the assumed and hypothesized factors causing HIV/AIDS in Quetta district the model summary showed 92% of the variation.

Model Summary:

R	R square	Adjusted square	R	Std. error of the estimate
.961	.924	.890		.04695

The following 22 variables were included in linear regression to analyze factors that significantly caused HIV/AIDS were Marital status (X₁) HIV/AIDS patient exists in Family (X₂) unawareness about HIV/AIDS before infection (X₃) Blood transfusion (X₄) Dental surgery (X₅) Circumcision (X₆) Kidney dialysis (X₇) Needle prick (X₈) Received injection for treatment (X₉) Surgery (X₁₀) Cannula use (X₁₁) Tattoos making on body (X₁₂) used razor (X₁₃) Sharing nail clipper (X₁₄) unsafe Sex (X₁₅) Ear/Nose piercing (X₁₆) Intravenous drug use (X₁₇) Sharing syringes (X₁₈) Sharing tooth brush/Miswak (X₁₉) Antimony equipment (X₂₀) Cup treatment (Hijama) (X₂₁) Migration (X₂₂).

Results:

The linear regression model detected 7 variables. These 7 variables were positively linked with HIV/AIDS. However, the positive factors associated were, Unawareness of respondent about HIV/AIDS before infection (X₃) Blood transfusion (X₄) circumcision (X₆) Tattoos making on body (X₁₂) used razor (X₁₃) unsafe sex (X₁₅) Antimony equipment (X₂₀) (Table 4).

The results revealed positive association between awareness and HIV/AIDS virus. The people in study area were indulged in risky behaviors and were more vulnerable to HIV/AIDS due to unawareness. Awareness play great role in prevention of HIV/AIDS. People can protect themselves if they have the knowledge about risk factors of HIV/AIDS. Moreover, the findings indicated that the people who had unscreened blood transfusion were more vulnerable to HIV/AIDS infection. Similarly, making tattoos on body with unsafe instruments were also responsible for the increased rate of HIV/AIDS disease. In the same way, the finding disclosed that unsafe shaving instruments are obviously one of the core contributors to the HIV/AIDS infection. The people who shaved with unsafe instruments were highly at risk than the people who ensured safety. More importantly, the results also revealed that unsafe sexual intercourse was significantly associated with

HIV/AIDS. Unsafe sex includes multiple partners, low condom use, anal sex, and oral sex. The results indicated that sharing toothbrush also caused HIV/AIDS. Sharing toothbrushes with those who had oral infection or gum bleedings were dangerous and transmitted HIV/AIDS. The findings of study showed that sharing antimony (*surma*) traditional eye liner with the infected persons of HIV/AIDS increased the risk of getting HIV/AIDS.

Table.2 Regression coefficients of variables causing HIV/AIDS in Quetta Balochistan

Variables	Description	unstandardized coefficients		standardized coefficients	T	Sig.
		B	Std. Error	Beta		
(Constant)		.147	.135		1.088	.280
X ₁ Awareness level of respondents about HIV/AIDS before infection	1 if aware; 0 if otherwise	.98	.016	.536	6.115	.000
X ₂ Blood transfusion	1 if had blood transfusion; 0 if otherwise	.144	.037	.432	3.862	.000
X ₃ Tattoos	1 if made tattoos on body; 0 if otherwise	.275	.029	.974	9.471	.000
X ₄ Razor	1 if used unsafe razor; 0 if otherwise	.036	.017	.244	2.133	.036
X ₅ Sexual intercourse	1 if had unsafe sexual intercourse; 0 otherwise	.314	.049	1.036	6.451	.000
X ₆ Circumcision	1 if Quacks clinic; 0 if Hospitals	.077	.031	.274	2.506	.014
X ₇ Antimony equipment	1 if used others people's antimony equipment; 0 if otherwise	.081	.041	.260	2.001	.049

Field survey, 2018

Discussion:

HIV/AIDS is one of most serious health issue for the globe. In the study conducted 59% of respondents were unaware about HIV/AIDS risk factors. The frequency of unawareness about transmission factors of HIV/AIDS was 71% in the study area. The infection of HIV/AIDS is not only increasing in developing and poor nations rapidly but as well in developed nations. The data percentage showed that 69% did not use condoms during sexual intercourse in Quetta district.

Number of studies proved that barbering procedure creating chances for HIV infection and other skin diseases. The proper use of instruments by the barber has key importance for the intervention of HIV and other lethal skin diseases (khaliq, 2005). The frequency of the unsafe razor use was 83% in the study group which is significantly increasing the risk of acquiring HIV/AIDS. Moreover, the subject specialists discussed that the risk factors for HIV/AIDS are blood transfusion, unsafe sex, and re-use of syringes, contaminated blood products, dental procedures, unsafe dialysis, and other surgical procedures. Moreover, the blood transfusion and all blood contaminated products transmit HIV/AIDS rapidly. Furthermore, the risky behaviors among the sex workers make them vulnerable to HIV/AIDS. The risky behaviors including low condom use, multiple sexual partners. In addition, the key informants told that the transmission of HIV/AIDS through the saliva and human bites of HIV/AIDS positive patients were epidemiologically insignificant, but it is biologically possible and it depends on the viral load of the infected person and the immune system of receiver. However, the past researches did not confirm the transmission of HIV/AIDS through saliva human bite. The co- infections of HIV/AIDS are the TB, HBV, HCV, diarrhea and certain viral and bacterial infections. They further said that HIV takes 2 to 8 year to convert into AIDS. Whereas the experts suggested some preventive measures about the HIV/AIDS which include the awareness about the mode of transmission of HIV/AIDS should be imparted to the public, blood should be transfused after screening, the surgical instruments need to be sterilized before using, and unsafe sex should be avoided.

Preventions include two sets of tactics. One set focuses non- sexual ways like blood transfusion, barbarous activities, and mother to child transmission. The other set consist of sexual behavior, as peer education, contraceptive use, media campaign and counseling. The world health organization suggest that treatment must be started when CD4 count under 200.

CD4 is a type of white blood cells which protect body from the infections. These cells also called T cells or helper cells. The HIV patient visit hospital once a month for treatment. The effectiveness of treatment

depends on continual attachment with medical practitioner. Moreover, HIV patients are usually affected with psychological problems such as depression, dementia, etc. They are seriously in need of counseling and follow up

Social Factors Causing HIV/AIDS:

This study found that the main factors causing HIV/AIDS are blood transfusion, unawareness, making tattoos on body, used unsafe razor, unsafe sex, and circumcision. Blood transfusion seemed to have been transmitting HIV/AIDS in Quetta city. The transmission of HIV/AIDS through blood has been decreased to zero in developed countries, but unfortunately blood transfusion is spreading HIV/AIDS rapidly in developing countries like Pakistan. This is due to the negligence of the doctors and other health practitioners in the study area. The key informants discussed that the blood transfusion increases the risks of acquiring of HIV/AIDS by insuring the proper blood screening can decrease the risk of HIV/AIDS transmission. Moreover, this study found that unawareness increased the risk of transmitting HIV/AIDS. The results discovered that owing to poor knowledge of HIV/AIDS transmission modes made them exposed to risky behaviors like injecting used syringes, unprotected sex, and consulting quacks. It was observed that the patients made tattoos on their bodies with unsafe instruments due to unawareness. However, the patients believed in misperceptions that HIV/AIDS is transmitted by sharing food with infected patients and mosquito bite.

Unsafe barbers' instruments like used razors articulated to be responsible for the transmission HIV/AIDS. Surprisingly, 83% of respondents shared used razors in the study area. Furthermore, the results found that unsafe sex seemed to have been another great challenge for the spreading of HIV/AIDS overwhelmingly. The frequency of unsafe sex was 69% in the study population. The sex workers are the key drivers of the HIV/AIDS. One of the key informants told that the "*sex workers with less education and awareness contributing to HIV/AIDS*". When a sex worker (HIV/AIDS infected respondent) was interviewed, she explained that "*clients like sex without condoms. They say sex with use of condoms is not pleasurable*".

Economic Factors Causing HIV/AIDS:

The findings of this study revealed that economic factors like less annual household income or poverty was interlinked at any way with the transmission of HIV/AIDS infection. For instance, results showed that most of sex workers were poor; Low income individuals and families in most cases consulted the quacks. It happened as they could not afford to pay for the medicines and doctors' fee. And the patients are treated in unhygienic environment which increases the risks for the transmission

of HIV/AIDS infection. The key informants told that the quack and dental surgeons did not insure the sterilization of instruments. They treated the patients with contaminated instruments and imparting to the spreading of HIV/AIDS infection.

Conclusion and Recommendations:

HIV/AIDS does not remain only a health issue but it is considered as a security problem since millions of people have been at the verge of extermination. The study found that blood transfusion, unawareness, unsafe sex, used razors and making tattoos on body were the main factors causing HIV/AIDS in Quetta, Balochistan. An overwhelmingly proportion of the population (77%) had blood transfusion. Similarly, the frequency of unsafe sex was 69%. Moreover, unawareness plays a significant role in the spreading of HIV/AIDS infection. Similarly, the unsafe razor use was also a highly significant factor. It is greatly imparting to the spreading of HIV/AIDS infection due to unawareness or the ignorant risky behaviors of barbers. They reuse razors and other sharp instruments like scissors without sterilization.

The data collected from the concerned hospitals related to HIV/AIDS revealed that the 94% affected by the epidemic disease were males. It is because of male dominated society. They have access to sex worker which make them vulnerable to HIV/AIDS. Besides it, male's population visit barber shops for shaving hair-cutting. The shaving instruments are mostly unsterilized at barber shops. Furthermore, the long route drivers remain away from home for long time. They satisfy their sexual needs with sex workers. They are illiterate and unaware about the factors of transmission of HIV/AIDS. During the sexual contact the use of contraceptives is meaningless for them which make them prone to HIV/AIDS. The study disclosed that 21% affected were farmers. The causes were minor injuries infected to them during farming, insecure sex, and use of the unsterilized instruments. We recommend that the Knowledge about infection can totally change the behavior pattern of the individual's. For instance, knowledge about preventive measures like avoid multiple sex partner, STD prevention, avoid mother to child transmission, delayed sexual activity, avoid the use of infected needles for use of drugs. Similarly, uses of condom, safety blood management, avoid use of used razors and piercing instruments are needed to control this deadly infection. In addition, the routine screening for the HIV antibodies other measures needs to be taken to improve the blood safety. These measures include proper selection of blood donors, as professional or paid donors are known to be associated with sex work or drug abuse and sensitive HIV tests. In addition, the government needs to ensure the appropriate decontamination of tattoos making instruments. Moreover, non-

disposable equipment used in a tattoos making center must be sterilized with a good disinfection after every single session to avoid HIV/AIDS infection. Similarly, razor blades can spread infections such as HIV/AIDS. Strict use of disposable razor to be ensured at barber shops and education on the transmission factor of HIV/AIDS will help preventing HIV/AIDS. Furthermore, sexual contact is the common route of HIV transmission. The government requires providing effective sexual health education especially for the adolescents to avoid unsafe sex and create awareness about the importance of contraceptives. Condoms during sex have to be used for the protection against many sexually transmissible infections (STIs) and HIV/AIDS.

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