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Research Article

# Factors Affecting Health Care Seeking Behaviour among Newly Diagnosed HIV Cases in Rawalpindi, Pakistan

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## Abstract

**Objective:** To assess the factors affecting health care seeking behaviour among newly diagnosed Human Immunodeficiency Virus (HIV) cases in Rawalpindi.

**Methods:** An analytical cross sectional study was conducted among 30 newly diagnosed HIV patients in Armed forces institute of transfusion (AFIT) Rawalpindi from 1st Oct to 31 Dec 2019 (within last 3-12 months), after obtaining informed voluntary consent, employing a purposive sampling technique. Confirmed HIV cases belonging to all genders and above 18 years of age were asked to respond to a structured validated questionnaire to collect data. Data was entered and analysed in SPSS version 22. Mean and Standard deviation were calculated for continuous variables. Pearson's correlation test was applied to find out the magnitude of relationship between the health care seeking behaviour scores and the factors affecting it. A p value of $<0.05$ was taken as significant.

**Results:** All of the patients were on treatment and majority 22 (73.3%) had gone to health care provider in early stages of disease without symptoms. It was evident from the results that health care seeking behaviour of HIV positive individuals had statistically significant association with psychological factors, individual factors, consumer evaluation view point, sociocultural and familial factors, situational factors and marketing factors (p value $< 0.05$).

**Conclusion:** The simultaneous effect of medical, psychological, emotional, socio cultural and situational and marketing factors was assessed and significant correlations (p value$<0.05$) were found out between these and health care seeking behaviour.

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**Key Words:** Health care seeking, Health care seeking behaviour, Human Immunodeficiency virus, HIV.

## Introduction:

The health care seeking behaviour (HSB) depends upon the cultural influences including social, behavioural, cognitive and material aspects of their lives. Early health care seeking in people living with Human Immunodeficiency Virus (PLHIV) is important to decrease the transmission of this disease within a society[1]. In most of developing countries, the majority of PLHIV do not start or continue their antiretroviral treatment (ART) which can pose a great threat to the general population in terms of transmission of this incurable disease[2] despite of free availability of ART.

Although still considered a country with low prevalence of HIV (about 0.1% in general population), Pakistan remains very vulnerable to the HIV epidemic due to socio-economic backgrounds, population mobility, lack of adequate knowledge, awareness and the latest increasing HIV prevalence rate in country[3]. Several factors including low literacy, high poverty, unsafe medical procedures and blood transfusion as well as poor treatment seeking behaviour of people infected with HIV have made Pakistan more vulnerable to HIV spread than other countries[4]. A study conducted in blood donors in northern Pakistan showed a trend of increasing infections in general population of blood donors[5]. Although HSB has been studied widely, existing developed world literature is not directly applicable to South East Asia's resource-limited and culturally diverse environments. There is limited literature on this area in Pakistan, especially on the behaviour of newly diagnosed patients. Hence to improve timely linkage to HIV care, persons making diagnoses and hospital referrals must be aware of factors that increase a patient's risk for delaying care seeking for the disease[6]. There is a paucity literature that makes it difficult to identify which of the factors have the strongest impact on health care seeking and could be targeted to improve HSB and treatment uptake. Understanding why patients start or fail to start treatment and care needs an explanation and understanding of complicated HIV related health care seeking actions affected by multi-level factors[7]. So, this study identifies factors which affect health care seeking of these people within the existing views of society in context of a disease associated with promiscuous behaviour and with no cure.

## Methods:

An analytical cross-sectional study was conducted in newly diagnosed (within last 3-12 months) cases of HIV in Armed forces institute of transfusion (AFIT) Rawalpindi from 1st Oct to 31 Dec 2019, employing a purposive sampling technique. A sample size of 30 was calculated, based on prevalence of disease 0.1% (4) with 95% CI and 5% margin of error, using WHO sample size calculator. Approval of Ethical Review Committee of Army Medical College National University of Medical Sciences was taken to conduct the study. Written as well as verbal informed voluntary consent was obtained from the client after explaining the purpose of study. Privacy, anonymity and strict confidentiality of participants was maintained keeping in view the sensitive nature of disease. AFIT was chosen as it is a large regional blood bank providing transfusion services to Rawalpindi, Islamabad and surrounding areas. There are approximately 55000 donations per year in AFIT. All of which are screened for HIV through Polymerase chain reaction (PCR) and Nucleotide Amplifying Technique (NAT). Confirmed HIV cases belonging to all genders and between 18-45 years of age were asked to respond to an interviewer administered structured validated questionnaire to collect data. The questionnaire had two parts including treatment seeking behaviour and factors affecting it[8]. The first part had 5 questions about actions performed by individual during the illness. The second part consisted of 6 sections including: Individual, Psychological, Socio-cultural and familial, Situational, Consumer evaluation view point and Marketing factors .It was translated verbatim in Urdu for better understanding of study participants. Most of the questions were scored on 5 point Likert scale (Very much, Much, Some-what, Less, None) with higher value indicating greater magnitude of relationship with the research question. Score for each factor domain was calculated and then by adding score of each domain total questionnaire score was obtained. Data was entered and analysed in SPSS version 22. Descriptive statistics like frequency and proportions were used for categorical variables. Mean and Standard deviation were calculated for continuous variables. Pearson's correlation test was applied to find out the magnitude of relationship between the health care seeking behaviour and the factors affecting it.

## Results:

A total of 30 participants completed the questionnaire. Male patients were 28 (93.3%) and only two (6.7%) were females. Mean age of the participants was 31±5 years. All of the participants were Muslims and most of them belonged to Rawalpindi district, and had a family size of more than five members.

Demographic characteristics of participants are exhibited in table 1.

**Table I:** *Sociodemographic characteristics of Participants. (n = 30)*

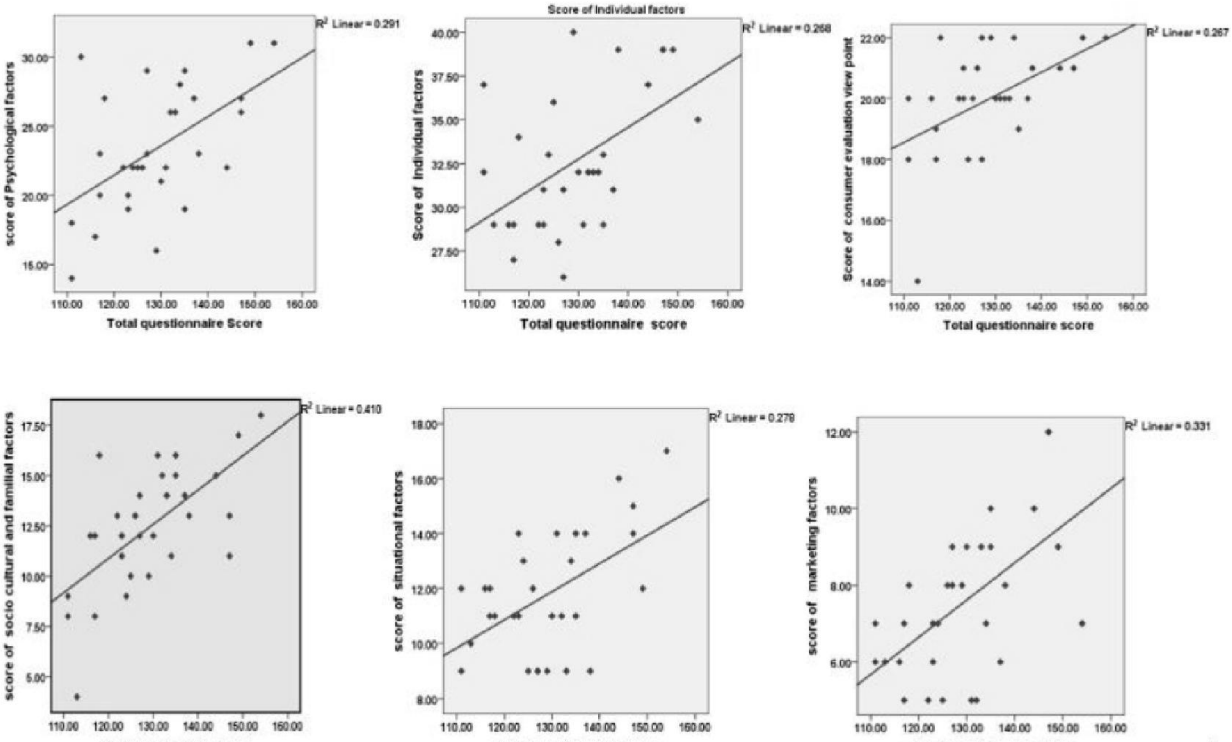
| Characteristics | Frequency (%ag |
|---|---|
| **Age (yrs.)** | |
| 20-30 | 15(50) |
| 31-40 | 15(50) |
| **Gender** | |
| Male | 27(90) |
| Female | 2(6.7) |
| Transgender | 1(3.3) |
| **Marital status** | |
| Single | 9(30) |
| Married | 21(70) |
| **Education** | |
| Illiterate | 0 |
| Primary | 2(6.7) |
| Middle | 11(36.7) |
| High school | 9(30) |
| Intermediate | 2(6.7) |
| Graduate or post graduate | 6(20) |
| **Income (PKR)** | |
| 12,250-36,650 | 16(53.3) |
| 36,700-61,000 | 12(40) |
| 61,500-91405 | 2(6.7) |
| **Occupation** | |
| Un employed | 3(10) |
| Elementary occupation | 13(43.3) |
| Plant and machine operators | 2(6.7) |
| Skilled Agricultural &Worke | 1(3.3) |
| Shop & Sales worker | 7(23.3) |
| Clerical job/Semi professiona | 4(13.4) |
| **Months living with HIV** | |
| 3-6 | 7(23.3) |
| 6-9 | 5(16.6) |
| 9-12 | 18(60) |
| Socioeconomic scale (based on Modified kuppuswammy's socio economic scale revision 2018) | |
| Upper Middle (16-25) | 5(16.7) |
| Lower Middle (11-15) | 11(36.7) |
| Upper Lower (5-10) | 14(46.7) |

In the study, seven (23.3%) went to get care from health provider on the next day, four (13.3%) participants went on the same day as they were diagnosed, six (20%) two days later while seven (23.3%) went after 3-7 days and another six (20%) went after more than 7 days. Majority of participants 26 (86.7%) went to a health care centre for treatment in the first step, while three (10%) went to private clinic and only one (3.3%) went to a traditional healer first before going to health care centre. All of the participants were still on treatment and majority 22 (73.3%) had gone to health care provider in early stages of disease without symptoms while eight (26.6%) went at the onset of mild symptoms. Mean scores of different factor domain affecting HSB are shown in table 2.

Parametric correlation was applied between different factors domain scores and total score of questionnaire to find out association between HSB and its affecting factors. The results are shown in figure 1.

**Table- II:** *Mean scores of factors affecting health care seeking behaviour*

| Factor domain | Total score | Mean score | SD | %age of mean | Correlation coefficient with total questionnaire score | P value |
|---|---|---|---|---|---|---|
| Treatment seeking behavior (general) | 28 | 22.5 | 1.7 | 80.3 | 0.282 | 0.130 |
| Psychological Factors | 32 | 23.4 | 4.5 | 73.1 | 0.539 | 0.002** |
| Individual Factors | 50 | 32.6 | 4.0 | 65.2 | 0.518 | 0.003** |
| Consumer evaluation view point | 25 | 20.0 | 1.7 | 80 | 0.482 | 0.007** |
| Sociocultural /Familial factors | 18 | 12.4 | 3.05 | 68.8 | 0.621 | 0.000** |
| Situational Factors | 20 | 11.8 | 2.2 | 59 | 0.406 | 0.026* |
| Marketing Factors | 25 | 7.5 | 1.9 | 30 | 0.559 | 0.001** |



* Correlation is significant at 0.05 level (two tailed)

**Figure - I:** *Correlation between Treatment seeking behaviour and its affecting factors( Psychological, Individual, Consumer evaluation view point, Sociocultural and familial factors, Situational and Marketing ) domains*

It was evident from the results that Health care seeking behaviour of PLHIV is affected by many factors and it has statistically significant association with Psychological factors, Individual Factors, Consumer evaluation view point, Sociocultural and familial factors, Situational Factors and Marketing Factors.

## Discussion:

According to results most of the participants reported to health care centre up to two days after being diagnosed. However other studies have found considerable delay in initiation of ART by the patients[9,10]. Almost all the patients in the study went to health care centre in the first place after diagnosis. This result is similar to some of the studies conducted in other parts of world as found by Audet et al that 56% of their study participants went to a hospital first after getting diagnosed and only 26% sought treatment from a traditional healer in first place[11].

Many of the participants in the study went to health care centre at an early stage of disease without symptoms which is again in contrast to findings of most of the studies done earlier as patient's feeling of being healthy has been found out to be a major barrier in not initiating treatment early without any apparent symptoms of disease[9].This contrast may be most probably due to the fact that treatment for HIV infection is provided free of cost in Pakistan by National Aids Control Program through various treatment centres in different tertiary care hospitals in country. To get free treatment patients have to get them registered with those centres which may have resulted in almost all newly diagnosed patients to report to treatment centre for this purpose.

Psychological distress, previously linked to late diagnosis and treatment of HIV (12), was strongly linked in our study to early initiation of ART, as the study results showed significant association between psychosocial factors and resultant health care seeking behaviour. So it is crucial for clinicians to monitor for signs of distress when enrolling in HIV treatment and subsequent patient visits, referring when possible to appropriate / accessible resources such as peer support or mental health services.

A beneficial course of action for patients is the acceptance of benefits provided by treatment which comes from getting knowledge about their disease (provided there are no barriers).In this study also, individual's knowledge about the disease and treatment options was found out to be significantly associated with health care seeking practices. This is in accordance with study conducted in Ghana in which knowledge of effectiveness of HIV treatment was a major motivator of health care seeking[13]. Similarly, in another study in china it was found out that knowledge about disease positively affected the uptake of treatment in PLHIV[14]. The results of this study are surprising given the relatively low level of knowledge and literacy in our country and its concentration in urban settings as knowledge and beliefs about the disease are a central determinant of the subsequent HSB and practices. Future research needs to further explain the determinants of knowledge about disease and its treatment awareness to ensure that patient's education and therapy is successful and acceptable at various stages during treatment.

Participant's statement that health workers were friendly with them reaffirmed Moradi and Mohraz's claim that while prejudice and stigma against HIV positive individuals is a global phenomenon that has a major impact on HSB of (PLHIV), health workers viewed and treated PLHIV with respect and did not discriminate against them[15]. For one study, doctors and nurses found different levels of prejudice and discrimination against PLHIV. Although doctors displayed more stigmatization views on other factors, nurses were more likely to provide patients with differential treatment based on their HIV status[16]. This was not the case in this study's results. The reason for non-discriminatory attitude may be that treatment to these patients is being provided at specialized HIV care centres where doctors and nursing staff is placed after proper briefing and training about dealing with HIV positive patients, resulting in better understanding, sympathetic and respectable attitude towards such patients.

The problem of socio-cultural factors affecting the transmission and management of HIV / AIDS is not new as the main restriction on behavioural modifycation and health care seeking[17]. Same was evident from the responses of participants of this study. Most of the participants thought that hiding the disease is a desirable trait. Lyimo et al.2014 indicated that the threats of the disease being associated with promiscuous and dishonourable behaviour contribute to the attitudes and expectations of people about the disease since, even after many years of public awareness, HIV / AIDS is still perceived to be infectious, serious, life-threatening and probably the product of usually immoral behaviour[18]. It also helps explain why most patients prefer to use services in privacy and conceal their status from family and others.

The perceived lack of privacy in the health care setting can be a limitation on the use of resources and discourages patients and potential clients from seeking therapy testing and treatment services. However most of the participants of this study were not much worried about their confidentiality. This was not the case in a study in United States as well as in Ghana in which majority of patients showed concern about confidentiality[19,20]. This lack of concern for confidentiality evident from study results might be due to the fact that most participants of the study belonged to lower socioeconomic class and had low education levels and low health literacy about the serious nature of disease itself. As many of participants didn't have much knowledge about disease aspects, and belonged to areas other than Rawalpindi so they were not bothered about confidentiality in HIV clinics as they were not in their usual area of daily living where somebody might know them.

The findings of this study are in line with findings from a systematic review which revealed that the patients receiving care in sub Saharan Africa face particular challenges, including inadequate transportation networks, inability to afford transportation costs and uneven distribution of ART clinics, which could pose a potential obstacle to HIV treatment over long distances[21]. Another review also supported the findings of cost and distance to health centre affecting the care seeking of patients[22]. Most of the patients in the study belonged to rural settlements around the city or came from another city or area and they had to travel long distances to HIV clinics (which are based in large cities only), for getting medicines. The cost and time of this travelling affected them despite of treatment being given free of cost.

It was evident from study in Tanzania by Lwoga E.T et al that patients mainly relied on interpersonal communication for health information collection about HIV[23]. It also found out that the rate of use of internet for seeking information about HIV/AIDS is also very low among patients living with HIV. Similar results were obtained from this study in which majority of patients relied on information from friends and doctors and did not try to use internet to obtain more information about the disease. This poor use of electronic information sources was due to the fact that a large proportion of PLHIV had low educational and income levels and thus faced many obstacles in accessing online information, including lack of awareness and skills on how to search online information. So they relied mainly on information provided by their close acquaintances and treating doctors[23]. Another reason for this could be that number of deaths due to AIDS is still low in our country so people don't know about the serious and debilityating consequences of a full blown disease due to HIV infection. So they are not interested in getting more knowledge about prevention, control and management of this disease. It is the responsibility of government to provide accurate and up-to-date information through mass media or awareness campaigns to tackle this issue.

## Conclusion:

The simultaneous effect of medical, psychological, emotional, Socio cultural and situational and marketing variables was assessed and significant correlations ($p \text{ value} < 0.05$) were found out between these and Health care seeking behaviour. Further multicentre studies with large sample size should be conducted to explore the effect of these factors in detail on Health care seeking behaviour of these patients. Developing models of care where social and financial obstacles are regularly identified and resolved, mental health is integrated with routine care, and delivering patient-friendly services is critical in sustaining care for HIV-infected individuals and achieving control of HIV transmission and spread.

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## References:

1. Meireles MV, Pascom AR, Duarte EC. Factors associated with early virological response in HIV-infected individuals starting antiretroviral therapy in Brazil (2014–2015): results from a large HIV surveillance cohort. Journal of acquired immune deficiency syndromes (1999). 2018 ;78(4):19.
2. Koirala S, Deuba K, Nampaisan O, Marrone G, Ekström AM. Facilitators and barriers for retention in HIV care between testing and treatment in Asia—A study in Bangladesh, Indonesia, Lao, Nepal, Pakistan, Philippines and Vietnam. PLoS One. 2017; 12(5):0176914.
3. National AIDS Control Program. 2019 (Accessed on 7 Nov 2019).Available from https://www.nacp.gov.pk.
4. HIV and AIDS Estimates. Country fact sheet Pakistan 2018 (online) (Accessed 15 August 2019). Available from: http://www.unaids.org.
5. Ghani E, Rathore M., Khan SA. Trends in human immunodeficiency virus seroprevalence in blood donors in northern Pakistan. Public Health.2016;131 (6):71-74.
6. Singh S, Ambrosio M, Semini I, Tawil O, Saleem M, Imran M, et al. Revitalizing the HIV response in Pakistan: A systematic review and policy implications. International Journal of Drug Policy. 2014; 25(1):26-33.
7. Kaufman MR, Cornish F, Zimmerman RS, Johnson BT. Health behavior change models for HIV prevention and AIDS care: practical recommenddations for a multi-level approach. Journal of acquired immune deficiency syndromes. 2014;669(3) :250.
8. Bahrami MA, Atashbahar O, Shokohifar M, Montazeralfaraj R. Developing a valid tool of treatment seeking behavior survey for Iran. J Novel Appl Sci. 2014;3(6):651-660.
9. Ahmed S, Autrey J, Katz IT, Fox MP, Rosen S, Onoya D. et al. Why do people living with HIV not initiate treatment? A systematic review of qualitative evidence from low-and middle-income countries. Social Science & Medicine. 2018;213(11):72-84.
10. Bor J, Ahmed S, Fox MP, Rosen S, Meyer-Rath G, Katz IT, et al. Effect of eliminating CD4-count thresholds on HIV treatment initiation in South Africa: An empirical modeling study. PLoS One. 2017;12(6):e0178249.
11. Audet CM, Sidat M, Blevins M, Moon TD, Vergara A, Vermund SH. HIV knowledge and health-seeking behavior in Zambézia Province, Mozambique. SAHARA-J: Journal of Social Aspects of HIV/ AIDS. 2012;9(1):41-46.

12. Drain PK, Losina E, Parker G, Giddy J, Ross D, Katz JN, et al. Risk factors for late-stage HIV disease presentation at initial HIV diagnosis in Durban, South Africa. PloS one. 2013;8(1):e55305.
13. Ogunbajo A, Kershaw T, Kushwaha S, Boakye F, Wallace-Atiapah ND, Nelson LE. Barriers, motivators, and facilitators to engagement in HIV care among HIV-infected Ghanaian men who have sex with men (MSM). AIDS and Behavior. 2018 ;22(3):829-839.
14. Mi G, Wu Z, Wang X, Shi CX, Yu F, Li T, et al. Effects of a quasi-randomized web-based intervention on risk behaviors and treatment seeking among HIV-positive men who have sex with men in Chengdu, China. Current HIV research. 2015;13(6) :490-496.
15. Moradi G, Mohraz M, Gouya MM, Dejman M, Seyedalinaghi S, Khoshravesh S, et al. Health needs of people living with HIV/AIDS: From the perspective of policy makers, physicians and consultants, and people living with HIV/AIDS. Iranian journal of public health. 2014;43(10):1424-1435.
16. Kabbash IA, Ali EA, Elgendy MM, Abdrabo MM, Salem HM, Gouda MR, et al. HIV/AIDS-related stigma and discrimination among health care workers at Tanta University hospitals, Egypt. Environmental Science and Pollution Research. 2018; 25(31):30755-30762.
17. Anugwom E, Anugwom K. Socio-cultural factors in the access of women to HIV/AIDS prevention and treatment services in South-southern Nigeria. Iranian journal of public health. 2016;45(6):754-760.
18. Lyimo RA, Stutterheim SE, Hospers HJ, de Glee T, van der Ven A, de Bruin M. Stigma, disclosure, coping, and medication adherence among people living with HIV/AIDS in Northern Tanzania. AIDS patient care and STDs. 2014;28(2):98-105.
19. Moore Jr KL, Dell S, Oliva M, Hsieh YH, Rothman RE, Arrington-Sanders R. Do confidentiality concerns impact pre-exposure prophylaxis willingness in emergency department adolescents and young adults? The American journal of emergency medicine 2019;37(6):1206-1207.
20. Dapaah JM, Senah KA. HIV/AIDS clients, privacy and confidentiality; the case of two health centres in the Ashanti Region of Ghana. BMC medical ethics. 2016;17(1):41.
21. Lankowski AJ, Siedner MJ, Bangsberg DR, Tsai AC. Impact of geographic and transportation-related barriers on HIV outcomes in sub-Saharan Africa: a systematic review. AIDS and Behavior. 2014;18(7) :1199-1223.
22. Syed ST, Gerber BS, Sharp LK. Traveling towards disease: transportation barriers to health care access. Journal of community health. 2013;38(5):976-993.
23. Lwoga ET, Nagu T, Sife AS. Online information seeking behaviour among people living with HIV in selected public hospitals of Tanzania. Journal of Systems and Information Technology. 2017;19(1/2): 94-115.