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Psychological Problems among Patients Suffer in HIV/AIDS in Pakistan

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ABSTRACT

This study examines the treatment motivation, stigma, and disclosure in 287 HIV-infected patients in Pakistan. Four validation scales were applied to assess treatment motivation, stigma and disclosure of patients. The results showed that female patients had significantly higher levels of stigma and disclosure than male patients. Unmarried patients had significantly higher levels of stigma and disclosure than married patients. Moreover, the treatment motivation significantly positively correlated with self-disclosure. Stigma significantly positively correlated with disclosure. Stigma and self-disclosure could predicate the treatment motivation. The study concluded that female and unmarried patients with HIV positive had more stigma and disclosure. Stigma, and disclosure affect the treatment motivation of patients with HIV positive.

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1. Introduction

It is reported that more than 34 million HIV infected people exist around the world (UNAIDS, 2015). Since the past 30 years, a total of 4882450 people from Pakistan have been screened for HIV. The overall prevalence rate was estimated at 0.041% (95% CI: 0.0–6.79). Maximum infection rate 15.05% (SE=4.27%) were observed among injecting drug users, followed by refugees 2.63%, sex Workers 2.63% and Prisoners 1.32% (Ali et al., 2017). According to UNAIDS estimates, about 130,000 people are living with HIV in Pakistan. Many factors, including low literacy rates, high levels of poverty and risky blood transfusions, have made Pakistan more at risk to HIV infection than other countries (UNAIDS, 2016). Stopping the spread of HIV and caring for those infected is one of the major health and humanitarian problems. HIV management highlights four key areas: (1) early diagnosis; (2) timely use of medication for treatment, (3) full adherence to treatment programs and (4) commitment to risk reduction practices (UNAIDS, 2015). Among four factors, treatment adherence is one of the important factors in preventing the emergence of viral failure and drug-resistant viruses (Marks et al., 2010). However, adherence and retention of treatment remain a long-

term problem for some people living with HIV (PLWH; Beer et al., 2012; Castro et al., 2015).

Patients of antiretroviral therapy (ART) adherence can be affected by many factors such as the degree to which experience stigmatization (Okoror et al., 2013; Kingori et al., 2013; Peltzer and Ramlagan, 2011), the extent to disclose the status (Qiao et al., 2012; Nokuthula, 2006) and how HIV-positive patients cope (Makoae et al., 2008). Also, various forms of stigma are a crucial factor which affects the ART adherence (Kingori et al., 2013). The stigma can take many forms such as avoidance, exclusion, denial violence, isolation, of service, awkward social interactions, physical distance and accusations, and have harmful effects on the social, mental and physical health for patient with HIV (Stutterheim et al., 2009; Mak et al., 2007). Self-stigma can lead to inferiority and anger. Enacted perceived or public stigma can cause the social and psychological response of others to stigmatized people (David et al., 2007). People with HIV-negative and partnered living with HIV person (in a serodiscordant relationship) may suffer from a form of indirect stigma (witnessing or hearing stigma about HIV-related which then becomes internalized) (Koester et al., 2017).

More importantly, the HIV-related stigma is affected by the disclosure of HIV status. Previous studies have shown that perceived stigma and disclosure negatively correlated (Smith et al., 2008) because of the disclosure can lead to stigmatization (Stutterheim et al., 2009; Black and Miles, 2002). The literature on disclosure suggests that when disclosure does occur, it does not happen in a systematic way (Odiachi A 2107). In contrast, study shows that information of disclosure can be an essential means of reducing the stigma associated with HIV (Brown et al., 2003). Disclosure may have beneficial consequences for people living with HIV, including greater mental health (Stutterheim et al., 2012; Kalichman et al., 2003; Smart and Wegner, 1999), good in relationship (Toth et al., 2013; Smith et al., 2008), social support (Toth et al., 2013) and improve treatment and safe sex (Stirratt et al., 2006).

A study showed that stigma and disclosure are also relevant to the coping (Qiao et al., 2012). Stigma can pose a major obstacle to a person's acceptance of HIV (Ncama et al., 2008) and disclosure is also part of the coping method (Holt et al., 1998). Positive reappraisal induces better-coping outcomes (Moskowitz et al., 2009). Treatment adherence in patients of HIV was identified as having a positive effect on coping (Silva et al., 2018), and religious coping can be used as a psychological resource to cope with adversity. Treatment adherence of patients could indicate their treatment motivation. A high degree of stigma is associated with poor treatment adherence (Nam et al., 2008).

The non-disclosure has limited opportunities to improve ART treatment, and disclosure has found more improvement in ART treatment (Fair and Albright, 2012). However, the relationship between treatment motivation, coping style, stigma and self-disclosure among people living with HIV/AIDS in Pakistan had not thoroughly studied.

The present study aims to compare the gender and marriage state differences in treatment motivation, coping style, stigma, and self-disclosure of HIV/AIDS among HIV patients and explore the relationship among treatment motivation, stigma and disclosure among HIV patients in Pakistan.

2. Methodology

The researcher used the convenient sampling technique for gathering the data. The researcher selected 287 HIV/AIDS patients including 65 female and 222 male from six districts (government hospitals) of were included in the study. Data collected from the (voluntary,

confidential counseling and testing center) hospitals. An (information session) delivered regarding the nature and treatment adherence of HIV/AIDS, and informed consent was taken and make sure the privacy and confidentiality were maintained. Moreover, face to face interview was conducted to collect the data from participants and instructed them to choose only one appropriate option regarding their actual symptom or feeling. According to standard procedure, scoring was performed from gathered data and proceeds for statistical analysis to compute results and formulated tables.

3. Measurements

The four validated scales were used to assess treatment motivation, stigma and self-disclosure of HIV patients.

3.1 Treatment Motivation Questionnaire (TMQ)

TMQ (Ryan, Plant & O' Malley, 1995) consists of 26 questions, which divided into four sub-scales, the 7-point Likert level (1=not at all; 7=very true) used. The first sub-scale "External Reasons" includes projects that reflect the apparent lack of choice of the subject in seeking treatment, as well as the experience of maintaining external pressure for treatment (For example, if I don't continue to receive treatment, I will be in trouble). The second sub-scale "Internal Reasons" includes items that reflect the excitement dynamics that have identified and inserted. (For example, I came to the clinic for treatment because it was important for me to solve my problems). The third sub-scale of "confidence" includes items that reflect the subject's expectations for positive treatment outcomes. (For example, I believe this program will work for me) In the fourth, "Help-Seeking" Measures the motivation to share problems and connect with others. (For example, I want to go public with other people in the program). It is study found that Cronbach's alpha value levels ranging from .72 to .96.

3.2 Stigma Scale

Stigma Scale developed by (King et al., 2007). Each of the 28 questions gets a greater stigma by 0-4. In the direction of agreement questions marked with an A are scored 0-4, while that in the direction of disagreement marked D scored 0-4. Cronbach's α for responses to the final version of 28 items was 0.85. No single item deletion improves internal reliability by more than 0.88. The first sub-scale Cronbach's α (discrimination) was 0.86; second (disclosure) 0.84 and third (positive aspects) 0.74.

3.3 Emotional Self Disclosure Scale (ESDS)

The ESDS (Snell et al., 1988) was administered to participants to assess their willingness to disclose their emotions to family or friends. This scale has 40 items. The ESDS has eight subscales, every subscale containing five items. The subscales based on Exposure to feelings related to depression, happiness, jealousy, anxiety, anger, calm, apathy, and fear. The item responses ranked according to the five-point Likert type ratio, from 1, not willing to discuss at all, 5, fully prepared to discuss. The project summary forms a comprehensive score. Cronbach's alpha and test-retest internal reliability consistency measured range from low 0.82 to high 0.94.

4. Results

4.1 Demographic characteristic of the subjects

Of the 287 HIV-infected individuals 222 were men and 65 women. Frequency and percentage are given for demographic variable in the table 1.

Table 1 Frequency distribution of demographic variables

Variables	Category	Frequency (%)
Gender	Male	222(77.4)
	Female	65(22.6)
Age	< 25	160(55.7)
	25-45	117(40.8)
	> 45 Years	10(3.5)
MS	Single	90(31.4)
	Married	197(68.6)
Education	Primary	240(83.6)
	Secondary	30(10.5)
	High	17(5.9)
Profession	Employed	260(90.6)
	Unemployed	27(9.4)
Income	< 15000	173(60.3)
	15000-30000	68(23.7)
	< 30000	46(16.0)
Living With	Divorced/widow	40(13.9)
	Nuclear	80(27.9)
	Joint	167(58.2)
Diagnoses	< 1 Year	60(20.9)
	1-4 Years	150(52.3)
	< 4 Years	77(26.8)

4.2 The Correlation between Treatment Motivation, Stigma, and Self-Disclosure

As shown in table 2, treatment motivation significantly positively correlated with self-disclosure while insignificantly correlated with HIV stigma. Similarly, HIV stigma significantly positively correlated with disclosure.

Table 2 Correlation between treatment motivation, stigma, and self-disclosure

Variables	TM	SS	DS
Treatment Motivation	1		
Stigma	0.117*	1	
Self-Disclosure	0.341**	0.279**	1

Note: ** Correlation is significant at the 0.01 level (2-tailed)

4.3 Multiple linear regression analysis

As shown in table 3, stigma, self-disclose and coping style significantly positively predicted the treatment motivation. Furthermore, we can conclude that one unit change in stigma will 0.251 changes in treatment motivation, also self- disclose change 0.362.

Table 3: Multiple Linear Regression Analysis

Dependent Variables	Independent Variables	Un-standardized Coefficients	SE	t	F	R ²
Treatment motivation	Constant	-12.82	1.3	9.86 ^{***}	49.05	0.324
	Stigma	0.251	0.10	2.51 ^{**}		
	Self-disclose	0.362	0.07	5.17 ^{***}		

Note: *** sig. ≤ 0.001 and ** sig. ≤ 0.01

4.4 The Gender Differences in Treatment Motivation, Stigma, and Disclosure

As shown in table 4, there is no significant difference found in treatment motivation and coping strategies between male and female patients. Similarly, stigma and disclosure were significantly higher in female as compared to male patients.

Table 4 Compare of the gender differences treatment motivation, stigma, and disclosure

Variable	Male	Female	T
	(n = 222) M (SD)	(n = 65) M (SD)	
Treatment Motivation	102.6 (9.1)	104.4 (10.3)	-1.36
Stigma	53.7 (5.9)	57.4 (6.3)	-4.38 ^{***}
Disclosure	117.4 (11.3)	121.7 (12.4)	-2.64 ^{**}

Note: *** sig. ≤ 0.001 and * sig. ≤ 0.05 , CI = Confidence Interval, LL= Lower Limit, UL = Upper Limit, df = 285

4.5 The comparison of treatment motivation, stigma and disclosure between married and unmarried patients

As shown in table 5, the level of treatment motivation is almost equal between married and unmarried HIV patients. Similarly, stigma and disclosure were significantly higher in unmarried patients than those of married patients.

Table 5 Compare of treatment motivation, coping strategies, stigma and disclosure between married and unmarried patients

Variable	Married	Unmarried	T
	(n = 90) M (SD)	(n = 197) M (SD)	
Treatment Motivation	102.7 (9.6)	103.1 (10.1)	-.32
Stigma	52.7 (7.2)	55.9 (6.3)	-3.81 ^{***}
Disclosure	116.4 (10.3)	119.8 (9.8)	-2.68 ^{**}

Note: *** sig. ≤ 0.001 and ** sig. ≤ 0.01 , CI = Confidence Interval, LL= Lower Limit, UL = Upper Limit, df = 285

5. Discussion

The present study explored the relationship between treatment motivation, stigma and self-disclosure among people living with HIV/AIDS in Pakistan. We found that female patients had higher levels of stigma and disclosure. Meanwhile, unmarried patients had higher levels of stigma and disclosure. Previous studies suggested that men living with HIV delay seeking treatment and receive treatment at an advanced stage of HIV infection, which makes them predisposed to increased death rates and worse treatment consequences (Shisana, Olive 2004). In contrast, female patients with HIV had the higher treatment and coping motivation as compared to male patients because female patients had positive coping such as acceptance, avoidance to escape and responsibility (Silva et al., 2018). In our study, no significant difference in treatment motivation and coping with HIV positive found between male and female patients. However, in the present study, we identified that female patients experienced more stigma as compared to male patients. The reasons given relate to HIV diagnostic disclosures and are also closely linked to socially recognized norms on gender roles, sexuality and responsibilities. In this context females are considered as the transmitters of HIV; hereafter, when they tested positive for HIV, they blamed HIV more than men. In the dominant male society of Vietnam, women experienced blame more than men (Hong et al., 2004). Our findings in the present study are, female living with HIV in Pakistan face significant stigma and more disclosures. The results imply that it should be noted the culture difference when considering the treatment motivation of patients with HIV positive. These findings are consistent with our study held by (Gladys et al., 2014) showed the same outcomes to present results and showed a higher level of female stigma as compare to male HIV patients.

Study shows that poor married people have a lower HIV prevalence rate than the poor unmarried people, and the other side wealthy married people's HIV prevalence is higher than that of wealthy unmarried people. The present study found that unmarried experienced more stigma and self-disclosure compare with married patients. The possible cause of the results may be that participants are less likely to reveal their HIV status to their spouses, so for those who live with their spouses, they may be under enormous pressure to keep their HIV status secret, leading to a higher level of HIV-related stigma. However, the risk of HIV did not differ between married and unmarried. These finding supported with the previous study (Shisana, Olive 2004).

Previous studies by (Lyimo et al., 2014) found that the correlation of stigma and disclosure with treatment. It also posited in a study that disclosure asserted with some positive treatment-related outcomes, due to motivating patients for treatment after perceiving the status of their disease (Toth, Messer, & Quinlivan, 2013).

6. Conclusion

The study concluded that stigma, disclosure and treatment motivation are significantly correlated with each other. Furthermore stigma, and disclosure leads to treatment motivation of patients with HIV positive. The results showed that treatment motivation, stigma and self-disclosure significantly higher in female HIV/Aids patients than that of male HIV/Aids patients. It was also found that stigma and self-disclosure significantly higher in unmarried HIV/Aids patients than that of married HIV/Aids patients.

References

AIDS epidemic.UNAIDS.(Accessed 20 Oct 2015).. <http://www.unaids.org/sites/default/files/media>

- asset/90-90-90_en_o.pdf.
- Beer, L. Heffelfinger, J. Frazier, E. Mattson, C. Roter, B. Barash, E. Valverde, E. (2012). Use of and adherence to antiretroviral therapy in a large U.S. sample of HIV-infected adults in care, 2007–2008. *Open AIDS Journal*.2012; 6:213–223. doi:10.2174/1874613601206010213
- Black, BP. Miles, MS. (2002). Calculating the risks and benefits of disclosure in African American women who have HIV. *Journal of Obstetric Gynecologic Neonatal Nursing*; 31:688–697. doi.org/10.1177/0884217502239211
- Brown, L. Macintyre, K. Trujilo, L. (2003). Interventions to reduce HIV/AIDS stigma: What have we learned? *AIDS Education and Prevention*;15:49–69. doi.org/10.1521/aeap.15.1.49.23844
- Castro, EM. Santiago, LE. Jiménez, JC. Dávila-Vargas, D. Rosal, MC. (2015). A social ecological view of barriers and facilitators for HIV treatment adherence: Interviews with Puerto Rican HIV patients. *PLoS ONE*. 2015; 10:e0125582. doi:10.1371/journal.pone.0125582
- David, L. Vogel, N, G. Wade & Ashley, H. (2007). Perceived public stigma and the willingness to seek counseling: The mediating roles of self-stigma and attitudes toward counseling. *Journal of Counseling Psychology*; 54:40–50. doi:10.1037/0022-0167.54.1.40
- Fair, C. Albright, J. (2012). “Don’t tell him you have HIV unless he’s ‘the one’”: Romantic relationships among adolescents and young adults with perinatal HIV infection. *AIDS Patient Care STDS*; 26:746–754. doi:10.1089/apc.2012.0290.
- Gladys B. Asiedu & Karen S. Myers-Bowman (2014) Gender Differences in the Experiences of HIV/AIDS-Related Stigma: A Qualitative Study in Ghana, *Health Care for Women International*, 35:7-9, 703-727. doi:10.1080/07399332.2014.895367
- Hong, K. T. Van, Anh, N. T. & Ogden, J. (2004). Because this is the disease of the century: Understanding HIV and AIDS-related stigma and discrimination in Vietnam. Washington, DC: ICRW. Retrieved from http://www.icrw.org/docs/vietnamstigma_0204.pdf
- Holt, R. Court, P. Vedhara, K. (1998). The role of disclosure in coping with HIV infection. *AIDS Care*; 10:49–60. doi:10.1080/09540129850124578
- Kalichman, SC. DiMarco, M. Austin, J. (2003). Stress, social support, and HIV-status disclosure to family and friends among HIV-positive men and women. *Journal of Behavioral Medicine*; 26:315–332. doi.org/10.1023/A:1024252926930
- Koester KA, Erguera XA, Myers JJ. (2017). “PrEP Makes My Relationship Even More Normal:” the discursive production of hope in the context of HIV pre-exposure prophylaxis among young adults with partners living with HIV infection. In: Persson A, Hughes SD, editors. *Cross-Cultural Perspectives on Couples with Mixed HIV Status: Beyond Positive/Negative Vol. 2*. Switzerland: Springer International Publishing p. 23–35. doi: 10.1007/978-3-319-42725-6
- Kingori, C. Reece, M. Obeng, S. (2013). Impact of internalized stigma on HIV prevention behaviors among HIV-infected individuals seeking HIV care in Kenya. *AIDS Patient Care STDS*; 26:761. doi:10.1089/apc.2012.0258-Source:PubMed
- King, M. Dinos, S. Shaw, J. Watson, R. Stevens, S. Passetti, F. Weich, S. Serfaty, M. (2007). The Stigma Scale: development of a standardised measure of the stigma of mental illness. *British Journal of Psychiatry*; 190:248–254. doi:10.1192/bjp.bp.106.024638
- Lyimo, R. A. Stutterheim, S. E. Hospers, H. et al., (2014). Stigma, disclosure, coping, and medication adherence among people living with HIV/AIDS in Northern Tanzania. *AIDS Patient Care and STDs*, 28(2), 98–105. doi:10.1089/apc.2013.0306.
- M, Ali. M, Nadeem. M, Numan. et al., (2017). Thirty years of HIV in Pakistan: a systematic review of prevalence and current scenario. *Future Virology* 1746–0794. doi: 10.2217/fvl-2017-0009
- Mak, W. Poon, CYM. Pun, LYK. Cheung, SF. (2007). Meta-analysis of stigma and mental health. *Social Science Medicine*; 65:245–261. doi.org/10.1016/j.socscimed.2007.03.015

- Makoe, L, N. Minri, G. Phetlhu, R, D. Uys, L, R. et al., (2008). Coping with HIV-related stigma in five African countries. *Journal of the Association Nurses AIDS Care*; 19:137-146. doi: 10.1016/j.jana.2007.11.004
- Moskowitz, J. T., Hult, J. R., Bussolari, C., & Acree, M. (2009). What Works in Coping With HIV? A Meta-Analysis With Implications for Coping With Serious Illness. *Psychological Bulletin*, 135(1), 121-141. doi.org/10.1037/a0014210
- Marks, G. Gardner, L. Craw, J. Crepaz, N. (2010). Entry and retention in medical care among HIV-diagnosed persons: a metaanalysis. *AIDS*; 24: 665-678. doi:10.1097/QAD.obo13e32833f4b1b.
- Nam, SL. Fielding, K. Avalos, A. Dickinson, D. (2008). The relationship of acceptance or denial of HIV-status to antiretroviral adherence among adult HIV patients in urban Botswana. *Social Science Medicine*; 67:301-310. doi.org/10.1016/j.socscimed.2008.03.042
- Ncama, BP. McInerney, PA. Bhengu, BR. (2008). Social support and medication adherence in HIV disease in KwaZulu-Natal, South Africa. *International Journal of Nursing Studies*; 45:1757-1763. doi.org/10.1016/j.ijnurstu.2008.06.006
- Nokuthula, L Sk. Helen, S. Glenda, E, G. & James, A, M. (2006). HIV disclosure and other factors that impact on adherence to antiretroviral therapy: The case of Soweto, South Africa. *African Journal of AIDS Research*; 5:17-26. doi.org/10.2989/16085900609490363
- Odiachi A. (2017). The context and process of pediatric HIV disclosure. *Vulnerable Child Youth Study*; 12(1):58-70. doi:10.1080/17450128.2016.1247220
- Okoror, TA. Falade, CO. Olorunlana, A. (2013). Exploring the cultural context of HIV stigma on antiretroviral therapy adherence among people living with HIV/AIDS in southwest Nigeria. *AIDS Patient Care STDS*; 27(1):55-64. doi:10.1089/apc.2012.0150
- Peltzer, K. Ramlagan, S. (2011). Perceived stigma among patients receiving antiretroviral therapy: A prospective study in KwaZulu-Natal, South Africa. *AIDS Care*; 23:60. doi: 10.1080/09540121.2010.498864
- Qiao, S. Li, X. Zhao, G. (2012). Secondary disclosure of parental HIV status among children affected by AIDS in Henan, China. *AIDS Patient Care STDS*; 26:546-556. doi:10.1089/apc.2012.0056
- Ryan, R. M., Plant, R. W., & O'Malley, S. (1995). Initial motivations for alcohol treatment: Relations with patient characteristics, treatment involvement and dropout. *Addictive Behaviors*, 20, 279-297. doi.org/10.1016/0306-4603(94)00072-7
- Smart, L. Wegner, DM. (1999). Covering up what can't be seen: Concealable stigma and mental control. *Journal of Personality and Social Psychology*; 77:474-486. doi:10.1037/0022-3514.77.3.474
- Smith, R. Rossetto, K. Peterson, BL. (2008). A meta-analysis of disclosure of one's HIV-positive status, stigma and social support. *AIDS Care*; 20:1266-1275. doi.org/10.1080/09540120801926977
- Stutterheim, SE. Bos, AE. Hoogendijk, R. et al., (2009). HIV-related stigma and psychological distress: The harmful effects of specific stigma manifestations in various social settings. *AIDS*; 23:2353-2357. doi:10.1097/QAD.obo13e3283320dce
- Stutterheim, SE. Bos, AE. Shiripinda, I. et al., (2012). HIV-related stigma in African and Afro-Caribbean communities in the Netherlands: Manifestations, consequences, and coping. *Psychol Health*; 27:395-411. doi.org/10.1080/08870446.2011.585426
- Stirratt, M.J., Remien, R.H., Smith, A. et al. *AIDS Behav* (2006). The Role of HIV Serostatus Disclosure in Antiretroviral Medication Adherence. *AIDS and Behavior* 10: 483. doi.org/10.1007/s10461-006-9106-6
- Silva, R. T. S., Silva, R. A. R. D., Rodrigues, I. D. C. V., Souza Neto, V. L. D., Silva, B. C. O. D., & Souza, F. M. D. L. C. (2018). Coping strategies of people living with AIDS in face of the

- disease. *Revista latino-americana de enfermagem*, 26.doi.org/10.1590/1518-8345.2284.2985
- O, Shisana.N, Zungu-Dirwayi. Y, Toefy. L, C, Simbayi. S, Malik. K,Zuma.(2004). Marital status and risk of HIV infection in South Africa.*South Africa Medical Journal*; 94: 537-543.
- Toth, M. Messer, LC.Quinlivan, EB. (2013). Barriers to HIV care for women of color living in the Southeastern US are associated with physical symptoms, social environment, and self-determination. *AIDS Patient Care STDS*; 27:613–620.doi:10.1089/apc.2013.0030
- Tobin, D. L. (1995).Coping Strategies Inventory: Short form.Unpublishedscale.
- UNAIDS Pakistan country fact sheet (2016).United Nations program on HIV/AIDS.<http://www.unaids.org/en/regionscountries/countries/pakistan> Date accessed: March 24, 2018
- UNAIDS. 90-90-90—An ambitious treatment target to help end the
- W. E. Snell, Jr. R.S. Miller, S.S. Belk. (1988). Development of the emotional self-disclosure scale. *Sex Roles*, 18, pp. 59-73.doi.org/10.1007/BF00288017