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Resilience, Social Support, and Quality of Life Among HIV/AIDS Positive Individuals

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HIV/AIDS remains a critical public health concern worldwide, with Central Asia reporting a 150% rise in infections. In Pakistan, low literacy, poor healthcare access, and limited awareness of prevention and transmission contribute to the spread of HIV infection, while stigma and discrimination negatively affect psychological and social well-being. This study is aimed at exploring any significant difference in resilience, social support, and quality of life among HIV/AIDS positive individuals in Lahore, Pakistan. A cross-sectional research design was employed, with a sample size of 300, aged 18 to 65 years, who were recruited from Punjab AIDS Control Program centers. Standardized measures were administered, and one-way ANOVA was applied to assess gender differences. The findings of this study illustrate that resilience is significantly different between males and transgender individuals. Reportedly, transgender participants had low resilience as compared to males. Females reported poorer quality of life as compared to males. However, nonsignificant difference was found in social support across all genders.

Keywords. Resilience, social support, quality of life, gender, and HIV/AIDS positive individuals

HIV remains a serious public health issue that has claimed the lives of approximately 39.9 million people worldwide. In 2023 alone, 0.63 million people died from AIDS-related causes, while 1.3 million new HIV cases were reported. By the end of 2023, an estimated 40.6 million people were living with HIV/AIDS. Furthermore, restrictions placed on healthcare systems during the COVID-19 pandemic contributed significantly to increased deaths and the spread of HIV infections across several countries (UNAIDS, 2023).

HIV is considered a life-threatening disease and is still incurable. Fortunately, it is manageable with Antiretroviral therapy (ART). After

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the advent of ART, HIV/AIDS positive individuals could live longer but face age-related challenges and health-related QOL issues (Emlet et al., 2015). Furthermore, resilience is a term widely used to describe individuals who survive and manage to cope by adopting a healthy lifestyle, despite having a traumatic background (Pivnick & Villegas, 2000). Resilience is associated with low rates of emotional and psychological distress, better health outcomes, and alleviated adverse effects of HIV infection (Emlet et al., 2010; Fang et al., 2015; Lyons et al., 2016). Reportedly, social support, especially family support, is considered an essential element for establishing resilience in HIV/AIDS positive individuals. Families need to stay together and help one another when faced with health-related challenges in their lives. Further, adequate family support develops and promotes resilience in HIV/AIDS positive individuals and retains better QOL (Earnshaw et al., 2015; Xu et al., 2018).

Zhiwen et al. (2017) emphasized that QOL is becoming an important aspect concerning HIV/AIDS positive individuals' physical and mental well-being. Furthermore, Gielen et al. (2001) documented that simple lifestyle changes, like taking regular ART, eating a healthy diet, physical exercise, and handling stress, make positive changes even in the complex background of HIV disease.

In this study aim is to address the pressing need to gain a deeper understanding of the factors that influence QOL, resilience, and social support among HIV/AIDS positive individuals. However, QOL is often compromised in this population due to stigma, health complications, and psychosocial challenges (Shrestha et al., 2019). Resilience, defined as the ability to adapt positively despite adversity, has been identified as a critical protective factor that enhances coping and promotes better psychological and social well-being among HIV/AIDS positive individuals (Dulin et al., 2018; Park et al., 2024). Moreover, social support has been shown to buffer the effects of stress, improve treatment adherence, and contribute significantly to higher QOL in individuals (Moradi et al., 2021). Therefore, gender plays an important role in shaping resilience and access to social support. Research indicates that males, females, and transgender individuals may experience different levels of stigma, coping mechanisms, and social support, which directly influence their health-related issues (Celeste-Villalvir et al., 2023).

Considering the above evidence, the present study seeks to examine the association between resilience, social support, and QOL among HIV/AIDS positive individuals, while also exploring potential differences across gender groups. Specifically, the study aims to test the following hypotheses: i) There is a significant positive correlation

between resilience and QOL among HIV/AIDS positive individuals. ii) Resilience differs significantly between males and transgender. iii) QOL significantly differs between males and females. iv) Social support significantly differs across gender among HIV/AIDS positive individuals.

Method

Participants

The nonparametric purposive sampling strategy was used for data collection. The sample size was comprised of 300 HIV/AIDS positive individuals with an age range from 18 to 65 years (M = 32.7, SD = 7.93). The participants were selected from the 3 different HIV/AIDS rehabilitation centers in Lahore, which were working under the Punjab Aids Control Program Department (PACP). Participants already registered with PACP, regularly taking ART, and having no history of significant physical or mental illness like Hepatitis B/C or psychosis were included in the study. Out of 437 participants, 137 were excluded based on criteria such as incomplete data, other serious medical conditions, severe cognitive impairments, and recent changes in HIV/AIDS treatment. These exclusions ensured that only participants with relevant and consistent data were included in the final analysis.

Measures

The following instruments were employed for data collection.

Demographic Form

A demographic form was designed to collect general information from participants, including age, marital status, education, profession, regularly taking ART, whether the family/friend knows about the HIV/AIDS positive status, and any other physical disease.

Adult Resilience Measure-Revised (ARM-R)

ARM-R was used to measure resilience levels in HIV/AIDS positive individuals. The scale had 17 items, and it was a 5-point Likert scale ranging from 1 = *low* to 5 = *high*. The test-retest reliability of ARM-R was .74, and Cronbach's alpha was .86 (Jefferies et al., 2018).

Multidimensional Scale of Perceived Social Support (MSPSS)

It was used to measure social support in HIV/AIDS positive individuals. The scale had 12 items, and a 7-point Likert scale ranging from 1 = *strongly disagree* to 7 = *highly agree*. MSPSS had three different subscales (Friend, Family, and Significant Others), and each subscale had 4 items. Moreover, test-retest reliability in three different domains, Friends, Family, and Significant Others, were .96, .93, and .96, respectively, and the alpha coefficient value of the Scale was .96 (Tonsing et al., 2012).

World Health Organization-HIV Quality of Life (WHOQOL-HIV BREF)

This measure was used to assess the QOL of HIV/AIDS positive individuals. The scale had 30 items. It was a 5-point Likert scale ranging from 1 = *strongly disagree* to 5 = *strongly agree*. WHOQOL-HIV BREF had six different domains (Physical, Psychological, Level of Independence, Social Relationships, Environment, and Personal Beliefs). The test-retest reliability in all 6 domains was .54, .77, .71, .76, .78, and .48, respectively. Cronbach's alpha coefficient value of WHOQOL-BREF was .76 (Khan et al., 2003).

Procedure

Ethical approval for the study was obtained from the Institutional Review Board (IRB) of Forman Christian College, Lahore (a Chartered University). The synopsis was subsequently submitted to PACP using their approved format, and written permission was obtained to collect data from three different HIV/AIDS treatment centers in Lahore. Both verbal and written informed consent were obtained from the participants. They were provided with comprehensive information about the study, including its purpose, potential findings, and implications. Participants were also assured of the confidentiality of their responses and informed about their rights throughout the research process.

Results

The Statistical Package for Social Sciences (SPSS, Version 23) was used to analyze data from 300 participants. Descriptive statistics were computed to determine the frequencies and percentages of the study variables. In addition, a one-way analysis of variance (ANOVA) was conducted to examine significant differences across genders.

A descriptive statistics analysis is conducted to compute the mean, standard deviation, and Cronbach's α values of the measurement tools.

Table 1: *Descriptives and Reliabilities of Measures*

Measures	*K*	*M*	*SD*	*α*
ARM-R	17	65.61	7.88	.76
MSPSS	12	66.14	11.78	.86
Significant	4	22.75	5.63	.96
Family	4	24.23	4.08	.93
Friends	4	19.15	5.81	.96
WHOQOL-HIV BREF	30	116.3	10.78	.75
Physical	4	12.52	1.92	.54
Psychological	4	16.09	2.3	.77
Level of independence	6	15.54	2.51	.71
Social Relationship	4	12.72	2.79	.76
Environment	4	28.11	4.28	.78
Personal Beliefs	8	13.19	3.39	.48

Note. K = Number of items; ARM-R = Adult Resilience Measures-Revised Scale; MSPSS = Multidimensional Scale of Perceived Social Support; WHOQOL-HIV BREF = World Health Organization HIV/AIDS Quality of Life Scale.

Table 1 illustrates the reliability analysis of the scales and their subscales used in this study. The Adult Resilience Measures–Revised Scale demonstrates acceptable internal consistency. The WHO-HIV Quality of Life Scale has acceptable reliability except for Physical and Personal Beliefs that are relatively low compared to the other four subscales.

Table 2 illustrates that the average age of the participants is 32.7 years (*SD* = 7.93), with ages ranging from 18 to 65 years. The majority of participants are male (77%), married, and living with their spouses. Unmarried/single participants represent the second-highest percentage (45%). A large proportion of transgender and female participants fall into the under-matriculation or uneducated category. Regarding employment status, the majority of participants are employed in either the private or government sector, while a smaller proportion are self-employed and running their own businesses. Notably, approximately 86% of transgender participants report earning a livelihood through dancing and begging.

Table 2**:** *Demographic Characteristics of Sample (N = 300*)

Variables	Males	Females	Transgender	Total
	n (%)	*n (%)*	*n (%)*	*n (%)*
Sample size	232(77)	52(17)	16(5)	300(100)
Marital status				
Single	117(52.3)	2(3.8)	16(100)	135(45)
Married	112(46.5)	26(49.9)		138(46)
Divorced	1(.4)	3(3.8)		4(1.3)
Widowed		19(36.4)		19(6.3)
Separated	2(.8)	2(3.84)		4(1.3)
Education				
Uneducated	46(19.9)	13(24.5)	5(31.3)	64(21.3)
Primary - Matric	120(51.9)	36(67.9)	11(68.9)	167(55.6)
Intermediate	31(13.4)	2(3.8)		33(11)
Graduation	29(12.7)	1(1.9)		30(10)
Professional Degree	5(2.1)	1(1.9)		6(2)
Occupation				
Unemployed	36(15.6)	12(22.6)	1(6.3)	49(16.3)
Government job	8(3.5)			8(2.6)
Private job	83(35.9)	4(7.5)	1(6.3)	88(29.3)
Retired	6(2.6)	1(1.9)		7(2.3)
Housewife		29(54.7)		29(9.9)
Self-employed	53(22.9)	6(11.3)	1(6.3)	62(20.7)
Driver	13(5.6)			13(4.3)
Labor	27(11.7)	1(1.9)		28(9.3)
Dancer			9(56.3)	9(3)
Begging			5(31.3)	5(1.7)
Doctor	2(.8)			8(.6)

Table 3 illustrates that most participants living with HIV/AIDS disclose their positive status to their family members (85%). Those who do not disclose to family members, disclose to close friends. All participants are registered with PACP and receive regular ART. Furthermore, approximately 87% of participants report knowing the reason for their HIV infection.

Table 3: *Sample Distribution Along Illness Related Experiences*

Variables	Males *n (%)*	Females *n (%)*	Transgender *n (%)*	Total *n (%)*
Duration of taking ART				
Less than 1 year	109(47.2)	23(41.5)	7(37.5)	139(45.7)
Above 1 year	122(52.8)	30(58.5)	9(62.5)	161(54.3)
Friend knows				
Yes	114(50.6)	23(43.4)	14(87.5)	151(50.3)
No	117(49.4)	30(56.6)	2(12.5)	149(49.7)
Family knows				
Yes	197(85.5)	52(98.1)	7(43.8)	256(84.7)
No	34(14.7)	1(1.9)	9(56.3)	44(15.3)
Any significant physical illness, such as hepatitis/TB				
Yes	0	0	0	0
No	231(100)	53(100)	16(100)	300(100)
Knows their illness reason				
Yes	219(94.1)	27(52.3)	16(100)	262(87.4)
No	12(5.9)	26(47.7)		38(12.6)

Note. N = frequency.

One-way ANOVA was administered to evaluate the differences in resilience, social support, and QOL across genders.

Table 4**:** *ANOVA of Resilience, Social Support, and QOL Across Genders (N = 300)*

	Male (*n* = 232)	Female (*n* = 52)	Transgender (*n* = 16)		
Variables	*M(SD)*	*M(SD)*	*M(SD)*	*F*	*p*
Resilience	66.22(7.78)	64.02(7.66)	61.94(8.69)	3.55	.03
QOL	98.18(15.88)	90.77(14.62)	93.81(15.97)	5.02	.007
PSS	62.47(12.21)	59.67(9.64)	58.60(11.08)	1.82	.16

Note. PSS = perceived social support.

Table 4 shows a significant difference among the three gender groups on resilience scores. Thus, Hypothesis 1 is supported.

Furthermore, a significant difference is observed in QOL between male and female HIV/AIDS positive individuals supporting Hypothesis 2. However, nonsignificant difference is found in social support across genders; therefore, Hypothesis 3 is not supported. In addition, a post hoc analysis using the Gabriel method reveals a significant difference in resilience between male and transgender participants. Specifically, transgender individuals demonstrate significantly lower resilience as compared to males.

Table 5**:** *Gender Difference in Mean Score Across Resilience and QOL (N = 300)*

Variables	Gender Comparison	Mean difference	*p*	95% CI [LB , UB]
Resilience	Male-Female	2.20	.15	[-.51, 4.91]
	Male-Transgender	4.28	.04	[.03, 8.47]
	Female-Transgender	2.08	.70	[-3.07, 7.24]
QOL	Male-Female	7.41	.004	[1.97, 12.84]
	Male-Transgender	4.36	.51	[-4.03, 12.76]
	Female-Transgender	3.04	.86	[-13.38, 7.30]

Note. CI = Confidence interval; LB = lower bound; UB = upper bound.

Table 5 shows that there is a highly significant difference in QOL between male and female participants. Specifically, male participants report a higher mean QOL score compared to female HIV/AIDS positive individuals, indicating that males perceive their overall well-being more positively. This finding provides support for the hypothesis that QOL significantly differs across genders. However, nonsignificant differences are found in QOL between male and transgender participants or between female and transgender participants, suggesting that the disparity in QOL is mainly evident between male and female participants.

Discussion

The present study was conducted to examine differences in social support, resilience, and QOL among HIV/AIDS positive individuals in Lahore, Pakistan. Findings are interpreted considering existing literature, indigenous studies, and Pakistani sociocultural dynamics. The sample consisted of 300 HIV/AIDS positive individuals recruited from three Punjab AIDS Control Program (PACP) centers in Lahore, Punjab.

The results indicated that most participants were men (77%), with a substantial proportion reporting infection due to injectable drug use

(32%). This is consistent with the findings of the National AIDS Control Program (NACP, 2021), which reported that most HIV-positive individuals in Pakistan are men and that injectable drug use remains a major driver of the epidemic. The use of contaminated syringes and unsafe injection practices continues to facilitate the rapid transmission of HIV in the region. Moreover, structural factors such as poverty, unemployment, limited knowledge of HIV transmission, poor blood transfusion safety, and stigma further exacerbate the spread of HIV in Pakistan (NACP, 2021).

Findings revealed that a large proportion of HIV-positive women (65%) reported infection from their spouses. This highlights the vulnerability of women in patriarchal societies like Pakistan, where gender inequality and lack of sexual health awareness often place women at higher risk. Although cultural perceptions often stigmatize women and transgender individuals as primary transmitters of HIV, empirical evidence suggests that injection drug users remain the primary source of spread (NACP, 2021).

A key hypothesis of the study proposed that resilience would significantly differ between male and transgender individuals. The findings supported this hypothesis, revealing that males had higher levels of resilience compared to transgender participants. This aligns with earlier research, which has consistently shown that transgender individuals often report lower resilience due to social rejection, stigma, and discrimination (Virupaksha & Muralidhar, 2018). In Pakistan, transgender individuals are marginalized from early childhood, often estranged from their families, deprived of education, and forced into begging or sex work for survival. These conditions, coupled with widespread stigma associated with both HIV and gender identity, create heightened psychological distress, which in turn undermines resilience. Research suggests that resilience among transgender individuals can be improved through family and community acceptance, educational opportunities, meaningful employment, and equitable healthcare access (Singh & McKleroy, 2011).

The study further confirmed significant gender differences in QOL. Specifically, males reported better QOL compared to females living with HIV/AIDS. This finding is consistent with international studies that report higher QOL among HIV-positive men than women (Mrus et al., 2005; Xu et al., 2018). In the Pakistani context, this disparity may be attributed to the stigma women face when diagnosed with HIV. Many female participants in this study reported contracting HIV from their husbands, yet societal norms often hold women responsible and label them as immoral. Such gendered stigma results in rejection, social isolation, and reduced access to social support, thereby

diminishing QOL (Cederfjäll et al., 2001; McDonnell et al., 2000). By contrast, men often benefit from gender-based privilege, face less blame, and receive comparatively greater support.

In contrast to expectations, the study did not find a significant difference in perceived social support across genders. This nonsignificant result suggests that despite cultural and gender-related barriers, HIV/AIDS positive individuals in this sample may have relatively similar access to support networks, especially given that all participants were registered with PACP and engaged in treatment. This finding contrasts with prior literature, which often reports that women and transgender individuals face reduced social support due to stigma and discrimination (Mo & Ng, 2017; Peltzer & Pengpid, 2013). One possible explanation is that institutionalized support systems, such as PACP centers, may provide a buffer against disparities in informal social support. However, the nonsignificant outcome may also reflect underreporting due to social desirability or limitations in the measurement of perceived support.

Implications and Suggestions

HIV infection has a lot of stigmas attached to it, which is the major cause of not reporting being positive. People experience a lot of shame in accepting they are positive about HIV, as society does not provide acceptance of this disease. Even though this disease could be deadly, people have the option to hide it instead of admitting it. There is a major need to spread awareness and remove the stigma attached to it. Campaigns should run to provide awareness in basic terminology for a better understanding of the dynamics of the infection/disease, and to learn the safety measures. Awareness is the key to helping patients with HIV/AIDS so that more individuals can be registered with the government, and data can be recorded.

Following that women face a lot of stigmas for being positive with HIV/AIDS, it is important to provide testing and treatment programs to maintain maximum confidentiality of the patients to enhance the number of patients seeking help. Moreover, psychoeducation should be provided to those women to prevent mother-to-child transmission in the concerned case.

Safe healthcare practices can play an important role in the prevention of HIV infection. Welfare organizations, government hospitals, etc., may come forward to provide psychoeducation and free-of-cost condoms, anti-inflammatory medications, lubricants, etc., so that safe sexual practices can be exercised. Furthermore, free-of-cost

tests shall be provided to the patients to control the infection/disease, and medication should be provided accordingly. For a successful prevention program, the welfare organizations or government must identify the hotspots for the drug abusers and may provide them with free syringes so that the use of contaminated needles can be prevented. Also, free-of-cost testing should be provided to drug abusers and their spouses to estimate and treat illness.

Limitations

This study has several limitations. First, the sample was collected only from Lahore, which may limit the generalizability of the findings to other cities or the rural areas of Pakistan. Second, the study primarily focuses on HIV/AIDS positive individuals attending specific healthcare facilities, which may not fully represent the broader population of HIV/AIDS positive individuals. Third, the study relies on self-reported data, which may affect the accuracy of the responses. Fourth, most of the participants were male, and all types of infected participants participated in this study. Fifth, gender differences in treatment adherence and their impact on outcomes could not be fully explored due to the limited sample diversity. Finally, a notable limitation of the study is the potential impact of the global coronavirus epidemic on the psychology of the participants. Given that this crisis has significantly affected health, political, and social systems worldwide; It may introduce confounding factors that could influence the study outcomes.

Suggestions for Further Studies

Future research could explore the long-term impact of ART adherence on QOL in larger and more diverse populations. Additionally, studies focusing on the effectiveness of targeted educational interventions to reduce stigma and promote accurate information about HIV/AIDS would be valuable. Investigating the role of community support systems and their impact on resilience could also provide deeper insights. Conduct longitudinal studies to examine the long-term effects of psychosocial support on the QOL for HIV/AIDS positive individuals. Furthermore, explore the effectiveness of community-based interventions in reducing stigma and increasing social support for HIV/AIDS positive individuals; Investigate the role of gender differences in treatment adherence and its impact on resilience and recovery outcomes.

Conclusion

HIV/AIDS is a challenging diagnosis that can lead to stigma and discrimination, especially due to misconceptions about its transmission. Lack of accurate information often results in individuals hiding their status and avoiding treatment. However, with proper ART and psychosocial support, HIV/AIDS can be managed effectively. Individuals need to seek timely help and adhere to treatment to improve their QOL and manage the illness successfully. Resilience and social support play crucial roles in promoting better outcomes for individuals living with HIV/AIDS.

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