THE DUAL INFLUENCE OF STIGMA AND RELIGION ON QUALITY OF LIFE AMONG INDIVIDUALS LIVING WITH HIV INFECTION

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Abstract

This study investigated the relationship between HIV stigma, religious coping strategies, and quality of life in individuals living with HIV infection. A purposive sampling technique was used, and sample size ($N = 125$ with $M = 32.12$, $SD = 12.287$) was calculated through an online G. Power calculator with a medium effect size on two-tailed with a 95 % confidence interval. A demographic information sheet, HIV Stigma scale, religious coping strategies questionnaire, and quality of life scale were used to collect the data. Reliability analysis showed that all measures have good to excellent levels of internal consistency. The results revealed a significant negative association between HIV stigma and quality of life, while religious coping strategies were positively related to quality of life. Personalized Stigma, religious coping, family system, and area were identified as predictors of quality of life. The findings have implications for understanding the cultural context in Pakistan. The study contributes to knowledge about factors affecting the quality of life of individuals living with HIV.

Keywords: Stigma, religion coping, quality of life, HIV Infection.

Introduction and Literature Review

Human immunodeficiency virus (HIV) attacks the immune system, specifically targeting CD4+ T cells. It can lead to acquired immunodeficiency syndrome (AIDS) if left untreated. The global HIV epidemic affected 37.7 million individuals worldwide in 2020. Sub-Saharan Africa reports the highest prevalence at 25.7 million. HIV prevalence in Western Europe is generally lower than in Canada and the United States. It has increased in France, Germany, the United Kingdom, and Western Europe

was approximately 0.2% in 2019, with the majority of cases occurring among men who have sex with men (European Centre for Disease Prevention and Control, 2020).

Australia and New Zealand have demonstrated lower HIV rates than the United States, Canada, and even Western Europe. Data from the Australian National Institute of Health and Welfare (NIHW) in 2020 estimated that there were around 25,000 individuals living with HIV in Australia. Similarly, the New Zealand AIDS Foundation (NZAF) reported an estimated 3,200 people living with HIV in New Zealand for the same year. Notably, both countries have observed a decrease in HIV prevalence attributed to the effective implementation of HIV prevention, treatment, and support programs. Pakistan, a country located in South Asia, has witnessed a significant rise in HIV infection rates from 2000 to 2018 (WHO, 2020). It ranges from 0.2% to 0.5% among pregnant women (National Institute of Health, in Pakistan), and adults aged 15-49 increased from 0.5% in 2001 to 1.5% in 2017 (Institute for Health Metrics and Evaluation, 2017).

Factors contributing to HIV's prevalence include limited access to condoms, sterile needles, medical resources, gender inequality, poverty, and healthcare challenges. Antiretroviral therapy (ART) is crucial for HIV management, reducing transmission risk when the viral load is undetectable. Prevention methods like condoms, male circumcision, and voluntary medical male circumcision (VMMC) are essential. Overcoming Stigma, expanding testing, and enhancing prevention programs remain critical priorities in the global fight against HIV (CDC, 2021; UNAIDS, 2020).

The human immunodeficiency virus (HIV) pandemic has had a profound impact on individuals, communities, and societies worldwide. The Stigma associated with HIV has hindered HIV prevention efforts, treatment adherence, and overall quality of life for individuals living with HIV. Stigma refers to the negative attitudes, beliefs, and discriminatory behaviors that individuals perceive or experience as a result of their HIV status. It encompasses both internal stigmas, where individuals internalize and perceive themselves as being unworthy, and external sigma, where others perceive individuals with HIV as undesirable or contagious. It is associated with emotional distress, social exclusion, and reduced access to healthcare services (Smyth et al., 2012). Negative stigma has been linked to increased levels of anxiety, depression, and distress among people living with HIV infection (Aral et al., 2011). HIV-positive patients are associated with discrimination, social marginalization, and limited healthcare access. It affects mental health and HIV prevention services (Smith et al., 2018). Brown et al. (2020) reported that HIV-positive people with higher stigma had lower physical, emotional, and social well-being. Johnson (2019) found that HIV-positive people with religious coping had higher self-esteem and social support, which lower depression and anxiety.

Religious coping strategies refer to the utilization of religious beliefs, practices, and rituals to manage and cope with the challenges of living with HIV. These strategies include prayer, meditation, attending religious services, seeking spiritual support, and relying on religious teachings to find meaning and solace (Gorman, 2017). Religious coping has been shown to provide HIV-infected individuals with a sense of meaning, hope, and spiritual support, helping them cope with Stigma, emotional distress, and the impact of living with HIV to improve their quality of life. Religious coping strategies improve the quality of life in HIV-positive people, including life satisfaction and well-being. It improves antiretroviral medication adherence and reduces psychological discomfort (Kinnamon et al., 2014).

Quality of life refers to an individual's subjective assessment of their physical, social, and emotional well-being. It encompasses physical health, psychological well-being, social support, activities, and overall well-being (WHOQOL Group, 1998). Physical factors include the medication side effects and barriers to accessing healthcare services. Psychological factors involve emotional distress, depression, anxiety, and stigma-related stress. Social factors comprehend the social support systems, social relationships, and social context that individuals living with HIV inhabit. Korsholm et al. (2009) reported that individuals living with HIV infection experienced a reduced quality of life compared to the general population. Stigma, psychological distress, and limited access to treatment services can significantly impact their quality of life (Boucher et al., 2018). Brown et al. (2020) revealed that HIV-positive individuals facing higher levels of stigma tend to experience a lower quality of life, affecting their physical, emotional, and social well-being. Davis et al. (2021) examined religious coping in

Pakistani HIV-positive people. Religious coping was linked to social support and spiritual well-being in a complex way. It can also cause worry, remorse, and shame. The literature mentioned above review discusses the dual impact of stigma and religion on the quality of life among HIV-positive individuals. Therefore, the following objectives and hypotheses are formulated.

Objectives of the Study
- To find out the relationship between HIV stigma, religious coping, and quality of life among individuals living with HIV infection.
- To investigate the predictors of quality of life among individuals living with HIV infection.

Hypotheses of the Study
- There will be a significant negative relationship between HIV stigma, religious coping strategies, and quality of life among individuals living with HIV infection.
- There will be a significant positive relationship between religious coping strategies and quality of life among individuals living with HIV infection.
- HIV stigma, religious coping strategies, and demographic variables will significantly predict the quality of life among individuals living with HIV infection.

Methodology
The current study is designed to explore how HIV stigma, religious coping, and quality of life are interrelated and identify factors that influence the quality of life among individuals living with HIV infection. Therefore, a correlational research design and survey method were used.

Sample
Participants were recruited using a purposive sampling method, and the sample size ($N = 125$) was determined using the G*Power 3.1.9.2 calculator. It was based on a medium effect size (.30) and a 95% confidence interval. The study focused on a diverse group of volunteers who were aware of their HIV status and engaged in appropriate treatment. This group included individuals from various backgrounds, such as homosexual, heterosexual, and transgender persons, including those infected through different means like partners, parental transmission, sexual abuse, syringe use, and blood transfusion.

Demographic Form
The sociodemographic and health-related information was recorded on a demographic sheet containing the age, gender, education, marital status, family system, number of dependents, duration of the problem, stage of the disease, and awareness about the problem.

HIV Stigma Scale
The HIV Stigma Scale (Bint-e-Saif & Shahzad, 2019) encompasses 40 items, each representing a unique aspect of the experience of living with HIV. Sample items illustrate themes like isolation in personalized stigma and privacy concerns in disclosure. It has four distinct areas: Personalized Stigma (item numbers: 13,16,18,24, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 38, 39, and 40), Disclosure (1, 4, 11, 17, 19, 21, 22, 25, and 37), Negative Self-Image (item number: 2, 3, 6, 7, 8, 11, 12, 13, 15, 23, 27, 38, and 39), and Public Attitudes (item number: 4,5,9,10, 11, 13, 14, 16, 19, 20, 22, 27, 28, 30, 32, 33, 34, 38, 39, and 40). The scale uses a 5-point Likert response format, varying from strong disagreement to strong agreement, and includes reverse-scored items to enhance the depth of the assessment. This structure allows for a detailed exploration of the multifaceted nature of HIV-related stigma.

Brief Religious Coping Scale (RCOPE)
The Brief Religious Coping Scale (Pargament et al., 1998) consists of 14 items categorized into Positive Religious Coping (item numbers: 1, 2, 3, 4, 5, 6, and 7), which express a secure connection

with a transcendent entity and an optimistic worldview, such as seeking a stronger bond with God. Conversely, Negative Religious Coping (item numbers 8, 9, 10, 11, 12, 13, and 14) captures spiritual struggles, exemplified by feelings of divine punishment for lack of devotion. Participants rate these items on a 4-point scale, ranging from not at all (1), Somewhat (2), Quite a bit (3), and A great deal (4). In the current study, only positive religious coping strategies were used.

WHO Quality of Life Scale Brief (WHOQOL)
The World Health Organization Quality of Life Scale (WHOQOL-BREF, 2000) comprises 26 items spread across four domains: Physical (item numbers 3, 4, 10, 15, 16, 17, and 18), Psychological (item numbers 5, 6, 7, 11, 19, and 26), Social (item numbers: 20, 21, 22), and Environmental (item number: 8, 9, 12,13, 14, 23, 24, and 25). Each domain is measured by specific items, for example, assessing energy levels for physical and enjoyment of life for psychological. The first two items evaluate the overall quality of life and health perceptions. Responses were recorded on a five-point Likert response format: 1= = *not at all*, 2 = *a little*, 3 = *moderately*, 4 = *mostly*, and 5 = *completely*. Domain scores are calculated as mean scores of items, with higher scores indicating better quality of life. This scale comprehensively assesses an individual's perceived quality of life in various domains.

Procedure
The Institutional Review Board of Lahore School of Behavioral Sciences, University of Lahore, authorized the research on HIV-infected individuals. Necessary permissions were secured from relevant authorities (Punjab Aids Control Program) and the scale authors. Participants who met the inclusion criteria gave written informed consent, maintaining their anonymity and confidentiality rights. They filled out booklets, including demographic information sheets, an HIV stigma scale, religious coping strategies, and a quality-of-life questionnaire, taking about 25-30 minutes each. Data normality checks led to the exclusion of some forms due to issues like missing values. The researcher provided psychoeducation where required.

Results
The study explored how HIV stigma, religious coping, and quality of life interact among individuals living with HIV. It also identified factors influencing their quality of life. The findings are detailed in the subsequent tables presented in the report.

Table 1 *Demographic and Health Profile of Individuals with HIV Infection (N = 125)*

Variables	Categories	f	Variables	Categories	f
Age	$M = 32.12, SD = 12.287$		Family System	Joint	87
Gender	Male	72		Nuclear	38
	Female	28	Number of Dependent	2-4	76
	Transgender	25		5-8	49
Education	Illiterate	78	Duration of Problem	Six months -1 year	76
	FA – BA	47		2-3 years	35
Profession	Working	90		4-5 years	14
	Not Working	35	Stages of Problem	1st	88
Area	Rural	89		2nd	15
	Urban	36		3rd	22
Marital Status	Married	101	Knowledge about Problems	Yes	120
	Unmarried	24		No	5

This demographic information provides a comprehensive overview of the participants regarding their age, gender, educational background, family structure, marital status, area of residence, duration, and stage of their health problem, including awareness about the disease. This information is crucial in understanding the context and specific characteristics of the study's participant group, especially in terms of their experiences with HIV and the sociodemographic factors that may impact their health,

stigma, religious coping strategies, and quality of life. The data reflects a diverse insight into the different experiences and challenges faced by individuals living with HIV. Additionally, the high rate of knowledge about the disease among participants indicates a well-informed group, which is crucial for understanding the impact of educational and awareness programs related to HIV.

Table 2 *Scale Properties for HIV Stigma, Religious Coping, and Quality of Life (N = 125)*

Variables	K	α	Actual	Potential	M	SD	Skew	Kurt
HIV Stigma	40	.96	33-113	40-160	73.57	13.47	.31	.04
Personalized	18	.95	10-33	18-72	20.07	3.75	.21	.61
Disclosure	10	.79	10-26	10-40	17.39	3.57	.15	-.31
Negative Self-image	13	.82	3-15	13-52	8.61	2.59	.15	-.34
Public Attitude	20	.93	9-39	20-80	21.45	5.23	.54	.36
Religious Coping	14	.90	8-48	14-56	21.85	4.66	-.33	-.56
Quality of Life	26	.90	26-130	64-159	125.43	18.57	-.31	-.07
Physical	7	.80	7-35	25-72	56.85	10.34	-.44	-.28
Psychological	6	.82	6-30	15-40	31.84	4.37	-.50	1.57
Social	3	.82	3-15	22-51	39.59	5.72	-.24	-.07
Environmental	8	.81	8-40	32-80	63.29	9.99	-.27	-.24

K = total number of items, M = Mean, SD = Standard Deviation, Skew = Skewness, Kurt = Kurtoses

The scales measuring HIV Stigma, Personalized Stigma, Disclosure, Negative Self-image, Public Attitude, Religious Coping, Quality of Life, and its Physical, Psychological, Social, and Environmental dimensions demonstrated good to excellent reliability. Cronbach's alpha values ranged from .79 (Disclosure) to .96 (HIV Stigma), indicating satisfactory internal consistency for each scale. The skewness values for all scales were relatively low, ranging from -.50 (Psychological) to .54 (Public Attitude), suggesting that most distributions were symmetrical. Kurtosis values ranged from -0.56 (Religious Coping) to 1.57 (Psychological), indicating that distributions did not deviate from normality. These results indicate that the scales used in the study were reliable and produced scores that varied within their respective ranges. The descriptive statistics provide a comprehensive overview of each construct's central tendency and variability, providing a basis for further analysis of these constructs in the context of HIV-related research.

Table 3 *Intercorrelation between HIV Stigma, Religious Coping, and Quality of Life among Individuals with HIV Infection (N = 125)*

Variables		2	3	4	5	6	7	8	9	10	11
1.	HIV Stigma	.95**	.89**	.94**	.98**	.13	-.45**	-.31**	-.34**	-.33**	-.37**
2.	Personalized Stigma		.79**	.83**	.95**	-.17	-.46**	-.31**	-.33**	-.38**	-.39**
3.	Disclosure			.84**	.89**	.04	-.38**	-.25**	-.29**	-.28**	-.28**
4.	Negative Self-image				.92**	.07	-.39**	-.30**	-.34**	-.31**	-.33**
5.	Public Attitude					.16	-.40**	-.32**	-.32**	-.32**	-.36**
6.	Religious Coping						.25**	.15	.39**	.19	.21*
7.	Quality of Life							.85**	.87**	.75**	.91**
8.	Physical								.68**	.59**	.57**
9.	Psychological									.52**	.63**
10.	Social										.59**
11.	Environmental										

**p<.01 (2-tailed).

In table three a correlation analysis of HIV variables found a positive correlation with Personalized Stigma (*r* =.89, *p* <.01), Disclosure (*r* =.94, *p* <.01), Negative Self-image (*r* =.98, *p* <.01), and Public Attitudes (*r* =.13, *p* <.01). HIV Stigma negatively linked with Religious Coping (*r* = -.45, *p* <.01), Quality of Life (*r* = -.31, *p* <.01), and its dimensions: Physical (*r* = -.34, *p* <.01), Psychological (*r* = -.33, *p* <.01), Social (*r* = -.37, *p* <.01), and Environmental (*r* = -.31, *p* <.01) These data imply that HIV

stigma is linked to lower quality of life and less religious coping. Similar to HIV Stigma, Personalized Stigma exhibited significant correlations with variables such as Disclosure ($r =.83$, $p <.01$), Negative Self-image ($r =.95$, $p <.01$), and Quality of Life ($r = -.31$, $p <.01$) and its dimensions. Disclosure and Negative Self-image had similar relationships to stigma factors, showing that these constructs are closely associated with HIV. The Disclosure revealed a substantial positive correlation with Negative Self-image ($r =.89$, $p <.01$). Public Attitude negatively correlates with all Quality-of-Life dimensions: Physical ($r = -.32$, $p <.01$), Psychological ($r = -.32$, $p <.01$), Social ($r = -.36$, $p <.01$), and Environmental ($r = -.32$, $p <.01$), suggesting that negative HIV attitudes lower quality of life. Using religious coping methods was positively connected with Quality of Life ($r =.85$, $p <.01$) and its aspects, indicating improved quality of life. The Physical, Psychological, Social, and Environmental Quality of Life measures were substantially associated, showing that they co-vary in this population. These findings highlight the complicated relationship between HIV stigma, self-image, public attitudes, coping methods, and quality of life. High negative associations between Stigma and quality of life were found.

Table 4 *Predictors of Quality of Life Among Individuals with HIV Infection (N = 125)*

Models	Variables	B	SE	β	t	P	R	R²	Durbin-Watson
1	Constant	104.39	6.17		16.91	.000	.42	.17	1.93
	Personalized Stigma	-.54	.17	-.46	-5.07	.000			
2	Constant	88.65	7.89		11.28	.000	.48	.23	
	Personalized Stigma	-.56	.10	-.41	-5.19	.000			
	Religious Coping	.71	.29	.24	3.09	.003			
3	Constant	79.03	12.81		6.17	.000	.54	.29	
	Personalized Stigma	-.47	.19	-.36	-4.32	.000			
	Religious Coping	.78	.27	.27	2.98	.004			
	Family system	-3.69	1.86	-.23	-2.01	.004			
	Area	5.72	2.84	.19	2.05	.004			

The findings of stepwise regression analysis reported in Table 4 indicate that the Durbin-Watson statistic for the regression model was 1.93, which supports the premise of error independence in the regression model, which is crucial for regression analysis validity. Model 1 (Personalized Stigma) explains 17% of the variance in the dependent variable. The model predicts the dependent variable substantially $F (1, 123) = 25.76$, $p <.001$. The Personalized Stigma coefficient ($B = -.54$, $SE =.17$, $β = -.46$, $t = -5.07$, $p <.001$) shows a substantial negative correlation with the dependent variable, with each unit increase resulting in a.54 unit drop in the dependent variable. The addition of Religious Coping considerably improves Model 2 (Personalized Stigma and Religious Coping) over Model 1, explaining 23.3% of variation $F (2, 122) = 18.49$, $p <.001$. Increased Religious Coping ($B =.71$, SE $=.29$, $β =.24$, $t = 3.09$, $p < =.003$) is linked to a.71 unit rise in the dependent variable. Model 3 (Personalized Stigma, Religious Coping, Family System, Area $R² =.29$ has the most potent explanatory power, explaining 29.2% of the variation. The model stays statistically significant after adding variables. Personalized stigma consistently negatively affected the dependent variable in all three models. In Models 2 and 3, Religious Coping positively correlated with the dependent variable. Model 3 adds Family System and Area to explain variance, indicating their importance. The increase in R² values from Model 1 to Model 3 suggests that adding variables improved the model's explanatory power. All the models' F-tests show they predict the dependent variable. These findings reveal the complex interactions between personal, relational, and contextual influences on interest. The detrimental effects of Personalized Stigma and the beneficial effects of Religious Coping are noteworthy, providing insights for therapies.

Discussion

The present research explored the associations among HIV-related stigma, religious coping strategies, and quality of life in individuals diagnosed with HIV infection. Consistent with the initial hypotheses, the results indicated a significant negative correlation between HIV stigma and both religious coping strategies and quality of life. Conversely, religious coping strategies and quality of life had a notable positive correlation. These findings align with previous research indicating that perceived stigma can adversely affect psychological well-being and coping mechanisms in chronic illness contexts (Barik et al., 2021). Similarly, the positive impact of religious coping strategies on quality of life is supported by Mpinga et al. (2023), who found that such strategies can foster resilience and improve life satisfaction among individuals with chronic health conditions. This study contributes to the growing body of literature on coping mechanisms in chronic illness, highlighting the complex interplay between stigma, coping strategies, and overall quality of life.

The current study corroborated the third hypothesis, which posited that factors such as personalized stigma, religious coping, family dynamics, and geographical location significantly influence the quality of life in individuals living with HIV. This finding is critical as it highlights the complex interplay of various factors in determining well-being among this population. Personalized stigma, as indicated in this study, detrimentally affects the quality of life, resonating with the observations of Parcesepe et al. (2023), who underscored its negative psychological impacts in chronic disease contexts. In contrast, the role of religious coping in enhancing life quality aligns with findings by Kumwenda et al. (2023), who noted its positive contribution to emotional resilience. The study also sheds light on the importance of family support, echoing the research of Antabe et al. (2023), which suggested that a nurturing family environment plays a pivotal role in improving life satisfaction.

The impact of geographical location, as explored by Zhang et al. (2023), was evident in this research, underlining the influence of socio-environmental factors on health outcomes. Collectively, these insights underscore the necessity for a holistic approach to supporting individuals with HIV, considering the varied dimensions influencing their quality of life. The findings are consistent with previous research and highlight the need for comprehensive support services addressing stigma reduction and the role of religion in coping (Bhardwaj et al., 2023).

Conclusion

This study plays a crucial role in unraveling the intricate relationship between HIV Stigma, religious coping strategies, and quality of life among individuals living with HIV infection, particularly in identifying factors that predict quality of life. The findings suggest that individuals who utilize religious coping strategies and seek spiritual comfort or solace in their faith experience an enhanced quality of life, which in turn helps diminish the effects of HIV-related Stigma. An individual's quality of life transcends physical health and is profoundly associated with psychological, social, and environmental aspects. The detrimental effects of Stigma, contrasted with the beneficial impacts of religious coping strategies in these domains, emerge as particularly significant.

Implications of the Study

Understanding the connection between HIV-related stigma, religious coping strategies, and the overall quality of life is essential for healthcare professionals and policymakers working to improve the lives of individuals with HIV. Educating the public to foster awareness and empathy is crucial in reducing stigma against those who are HIV-positive. Healthcare providers are vital in offering comprehensive care that includes psychological and social support beyond medical treatment. Public health initiatives should aim at changing societal perceptions and reducing the stigma associated with HIV. Additionally, policies need to be inclusive, focusing on protecting the rights of HIV-positive individuals, combating discrimination, and ensuring access to mental health resources. Training for healthcare workers is also essential, equipping them to understand and address the stigma and mental health challenges associated with HIV. Finally, enhancing community and social support systems can significantly reduce isolation and improve the quality of life for those living with HIV. This holistic

approach, addressing physical, psychological, social, and spiritual needs, is key to effectively supporting individuals with HIV.

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