Journal of Social Sciences Review (JSSR) DOI: https://doi.org/10.54183/jssr.v3i2.295

**How to Cite This Article:** Shakeel, I., Afzal, A., Alvi, A. S., & Hussain, I. (2023). Impacts of Spirituality on Health Status of HIV/AIDS Infected People: A Study of HIV/AIDS Control Centers in District Gujrat and Sargodha, Punjab, Pakistan. *Journal of Social Sciences Review*, 3(2), 579-592. https://doi.org/10.54183/jssr.v3i2.295

# Impacts of Spirituality on Health Status of HIV/AIDS Infected People: A Study of HIV/AIDS Control Centers in District Gujrat and Sargodha, Punjab, Pakistan

| | |
|---|---|
| Iqra Shakeel | Lecturer, Department of Sociology, Gift University, Gujranwala, Punjab, Pakistan. |
| Afzaal Afzal | Doctoral Student, Department of Social Work, University of the Punjab, Lahore, Punjab, Pakistan. |
| Aaqib Shahzad Alvi | Assistant Professor, Department of Social Work, University of Sargodha, Punjab, Pakistan. |
| Intisar Hussain | MSc Sociology, Department of Sociology and Criminology, University of Sargodha, Punjab, Pakistan. |

**Vol.** 3, **No.** 2 (Spring 2023)

**Pages:** 579 – 592

**ISSN (Print):** 2789-441X

**ISSN (Online):** 2789-4428

**Key Words**

Spirituality, Religious Practices, HIV Infection, Coping Strategies, Social Stigma, HIV/AIDS

**Corresponding Author:**

Iqra Shakeel
Email: khiljiiqra@gmail.com

**Abstract:** *Spirituality is a complex and multilayered construct that can incorporate the internal, external, personal, emotional and physical expression of the sacred expression. Spirituality refers to different prospects for different people, such as believing in a higher power, inner peace, finding a higher purpose in life, and connectedness with self, others and the natural world, among others. Spirituality has a significant association with the life of human beings and is a greater source of positive deeds, which has a great concern in an individual's personal, social, physical and economic situation. Throughout the world, especially in developing countries like Pakistan, individuals living with HIV face several stressors regarding the chronicity of their diseases and experience a very high level of post-traumatic stress. In this study, researchers examined the impacts of spirituality on the health condition of HIV patients by applying quantitative research methods & techniques. Data were collected from patients registered at HIV/AIDS control centres of districts Gujrat and Sargodha. Non-random convenience sampling techniques were applied, and primary data was collected through a structured questionnaire. Advanced statistical software SPSS-21 was used for empirical and reliable results. The findings of the study indicated that spirituality has significantly positive impacts on the psycho-social and physical health conditions of HIV patients.*

## Introduction

Spirituality refers to different prospects for different people, such as believing in a higher power, finding inner peace, trying to find a higher purpose in life, and feeling connectedness with self, others and the natural world (Reid et al., 2023). The concept of spirituality is a complex and multilayered construct that can incorporate the internal, external, personal, emotional and physical expression of the sacred institutional, formal and outward expression. Spirituality or religious practice has a significant impact on the life of human beings and a greater source of positive deeds, which has a great concern in an individual's personal, social, physical and economic situation (Filiatreau et al., 2021; Rich et al., 2022). It gives meaning to life and describes association with culture, rituals, attitudes and practices of society. Numerous empirical studies (Grill et al., 2020) indicated that spirituality / religious practices are strongly associated with dealing with chronic health issues and diseases

such as HIV infections, stressors and social stigmas, among others (Saberi et al., 2021).

Acquired immune deficiency syndrome (AIDS) is a chronic disease with rigorous psycho, social, physical and economic consequences on human lives (Wei et al., 2023). It can create a vicious cycle of issues such as prejudice and stigma, psychiatric disorder, abandonment of partners, and destruction of the immune system, among many others. Throughout the world, especially in developing countries like Pakistan, people living with HIV/AIDS may experience a very high level of distress and post-traumatic stress (Khademi et al., 2020; Bukhori et al., 2022). HIV-infected patients incorporate spirituality / religious practices as a way to cope, to bring a sense of meaning, to help reframe their lives, and purpose to their lives in the face of an often devastating condition. Spirituality has also been associated with life satisfaction, quality of life, functional health status and overall well-being (Ahmed et al., 2021).

Globally, spirituality / religious practice plays an important role in the lives of people, and over 88.7% worldwide population profess to religion (Dilger et al., 2022). The association of spirituality with the prevention, management and treatment of HIV patients has been largely recognized from the onset of HIV/AIDS diseases in 1981 (WHO, 2021). A large number of faith-link networks such as Tear Fund, Islamic Relief, Caritas International, an international network of Religious Leaders living with HIV, World Conference of Religion for Peace, WHO and UNAIDS, among others, have joined with the aim to provide more resources at preventing transmission and improving HIV pandemic (WHO, 2021; Parcesepe et al., 2023).

Spirituality is one of the most frequently used coping strategies among the patient with HIV to cope with social, psychological and economic stressors. Researchers with HIV-infected patients (Kotze et al., 2013; Ataro et al., 2020; Øgård et al., 2023) indicated that spiritual practice and interaction with spiritual personalities were the most common and influencing source of reorganizing and connectedness. World health organization (WHO) 2013-2030 "mental health action plans" significantly recommended the collaboration with spiritual/religious personalities and faith healers as cognitive health treatment (WHO, 2021). Spirituality can play a vital role in enhancing psychological health and social stigma related to HIV, promoting adaptability, providing appropriate cultural, rituals, and behavioural reasoning and helping in reducing the gap between patient-internal and external situations (Armoon et al., 2022). Greater collaboration of spiritual practice, religious leaders, and the medical community has an exhaustive potential to improve mental health care, de-stigmatize psycho-social disorders, and cultural relevance and treatment among patients with HIV (Katz et al., 2021). Spirituality as a coping strategy is considered an acceptable, effective and sustainable method that has long-lasting positive impacts on patients with HIV (Filiatreau et al., 2021).

Spirituality is a coping strategy for patients living with HIV/AIDS bringing about the development and self-actualization of human potential for the benefit of individuals and the community (Pan et al., 2023). Religious ideologies connect people with good deeds, healthy life practices and simple lifestyles, among others and consider these practices one of the most effective preventive maintenance (Junior et al., 2020). People involved in higher levels of spirituality face less psycho-social distress, less pain, better cognitive and social function, and greater energy and will to live, among others. People from this approach strongly believe that spirituality protects against the transmission of chronic diseases such as HIV, among others (Jolle et al., 2022).

Medical science, with other health-related disciplines, has struggled for a long to develop an appropriate spirituality or religious-based

intervention to provide efficient assistance for HIV-infected patients (Bockrath et al., 2022). Such interventions may provide universal coverage and be accepted by patients, families and healthcare professionals. Empirical knowledge as per specific needs from numerous socio-cultural backgrounds of HIV-infected patients is needed (Katz et al., 2021). The widespread application of spirituality as a coping strategy for serious medical, social, psychological and physical conditions has been demonstrated in existing literature (Sanagouye et al., 2018). It has been reported previously that spirituality helps people living with HIV cope with their health conditions by engaging in behavioural interventions, reduction of distress and anxiety, improving connectedness with self and dealing with social stigma, improve confidence and hope for life (Dunbar et al. 2020).

The use of traditional healers, from traditional potions, prayers to cure, holy water, and sacrifices in the name of God, is well documented, which also endorsed the efforts of the medical community to retain patients living with HIV (Hailegabriel et al., 2023). Most of the time, patients have an unwavering connection to their spiritual leaders or inspirer; encouragement and support from them enhance the use of complementary medication and brighten the HIV patient's life (Liu et al., 2022). This protocol serves as preventive preparation to identify, explore and map the empirical knowledge on spirituality regarding treatment adherence among people living with HIV in developing countries, especially in Pakistan (Ataro et al., 2020).

Highlighting the complexity of the relationship among spirituality, religious practices on one hand and medication, biomedical treatment, scientific languages, and public health initiatives on the other hand, this anthology study largely uncovered the interdependence of spirituality and HIV/AIDS patients treatment approach (Andriati et al., 2023). This research tries to critically interrogate the emerging phenomenological epidemic of HIV/AIDS in Pakistan society and its interconnection between spirituality and biomedicine in the area of antiretroviral treatment of HIV/AIDS. With the religious mindset and social stigma among HIV patients in Pakistan, researchers offer a unique study at the interface of spirituality, medical humanitarianism, manifold therapeutic traditions, moralities and religious practices so the patients and their families co-evolve in that chronic situation. This study also sheds new dimensions on how spirituality and religious practices are formed in response to the dilemmas patients face with the interaction of life-prolonging treatment.

## Objectives of the study

- To examine the role of spirituality as a source of strength, resilience and well-being for patients living with HIV/AIDS
- To analyze the impacts of spirituality on the health conditions of patients living with HIV/AIDS

## Theoretical Framework of the Study

### Attachment Theory

When an individual is dependent and emotionally bonded with others, attachment starts. However, the circumstances attached to the presence of an attachment are really complex and difficult to understand. To deal with this multifarious phenomenon, John Bowlby presented an extensive attachment theory which directly dealt with a psychological connectedness between humans and lasted for a long period of time. Attachment theory and treatment of patients with HIV have demonstrated psycho-social adaptation and preserving critical, influencing and life-sustaining relationships. The prime intent and understanding of attachment theory are to sensitize the therapist to the function and nature of psycho-social attachment, aids in

observations and attachment phenomenon as revealed in the patient's behaviour.

The attachment theory also alerts patients, families and healthcare professionals to understand the themes of attachment, trauma, neglect, abandonment and rejection in the patient's narrative. Such narratives can develop connections with HIV patients' capacities, reflect mental distress, making sense of relationship patterns, behaviour and their early inter-subjective experience. Attachment theory also offers an opportunity to evaluate the HIV patient's attributes of others, nature and affective qualities of his internal representation of others.

This process significantly enhances the patient's capacities for regulation and reflective functioning, metallization and adaptation, among others. This strengthens the ability of depressed patients to actively alternate models of interrelationships and interactions and enhances their capabilities to empathize with others. To make more reasoned choices, reduce the tendency of perceptual distortion, reduce tendency, defensive exclusion and selective inattention in critical situations that develop a sense of endangerment to them and concomitant in the menace of self-destructive behaviour.

## Theory of Religious Coping

From the beginning, religion was marginalized within the mainstream context of psychological research and theories. Consistent with the integration of the psychology of religion and spirituality, Kenneth I. Pargament recognizes that spirituality and religious functions are multifaceted, complex and incandescent. Pargament pertained to the theory of religious coping, which involves drawing on religious practices, beliefs, and understanding to cope with the stressors of life. The religious coping theory provides a broad scope of research, design and implication for the psychological, social, physical, and spiritual well-being of individuals, families and communities.

There are three main coping methods in Pargament's theory of religion, such as i) deferring style, which involves attachment of all problem-solving to God. The second one is ii) self-directing, which deals with when individuals are selected to utilize the power of God to solve the problem by themselves, and the third one is iii) collaborative, which is implemented when the people treat God as a teammate in the process of problem-solving. The theory of religious coping mainly revolves around the collaborative style of coping that has found significant psycho-social benefits such as enhancing self-esteem, reduction of depression and distress, hope for betterment, self-actualization, acceptance and positive imagination, among others.

Pargament theory of religious coping directly impacts the psycho-social and physical health of patients living with HIV/AIDS and is also helpful for health professionals to learn how spirituality has an influence on the cognitive and physical health of HIV patients. Furthermore, Pargament has strong faith that involvement in religious discussions should become a major part of therapeutic treatment. He strongly recommended and advocated that a religious guidebook must be established for patients, their families and their healthcare professionals for better, speedy and positive recovery of patients.

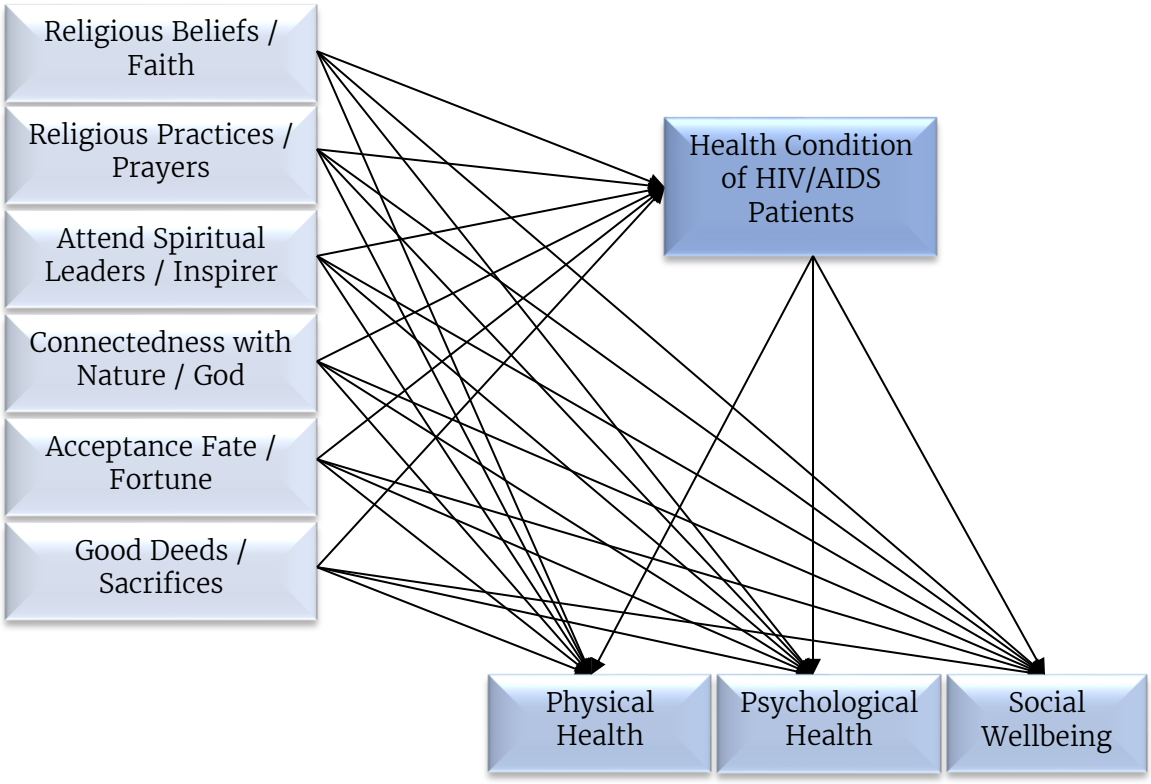
## Conceptual Framework

The prime objective of this research study is to understand the role of spirituality as a source of strength, resilience and well-being for patients living with HIV/AIDS. From the beginning, spirituality was marginalized within the mainstream context of social, psychological and religious research, which clearly indicates that the relationship between spirituality and the health condition of HIV patients is bidirectional. Patients living with HIV/AIDS have a supportive spiritual atmosphere and cope better with their

psycho-social and physical stressors. Adequate knowledge, understanding and implication of spiritual practices can have significant impacts on the health conditions of patients living with HIV before and after infection. This study considers spirituality as a coping strategy as an independent variable and the health conditions of patients with HIV as dependent variables. The conceptual framework Figure-1 highlighted the flow relationships among independent and dependent variables that may have impacts accordingly.

**Figure 1**

*Conceptual Framework of the Study*




## The Hypothesis of the Study

HIV/AIDS has become one of the biggest challenges for medical science, with severe consequences for individuals, families and communities. Throughout the world, healthcare professionals put their best efforts into preventing, controlling and reducing this epidemic and, applying numerous methods, techniques, strategies and trying to maintain a conducive environment for the patient living with HIV. The subject matter involves various factors due to its sensitive nature and importance for human beings. By retaining the focus on the impacts of spirituality as a coping strategy on the health conditions of patients living with HIV following hypotheses were proposed.

**H1.** A higher level of spirituality leads towards better psychological health for patients living with HIV

**H2.** A higher level of spirituality leads towards better social well-being of patients living with HIV

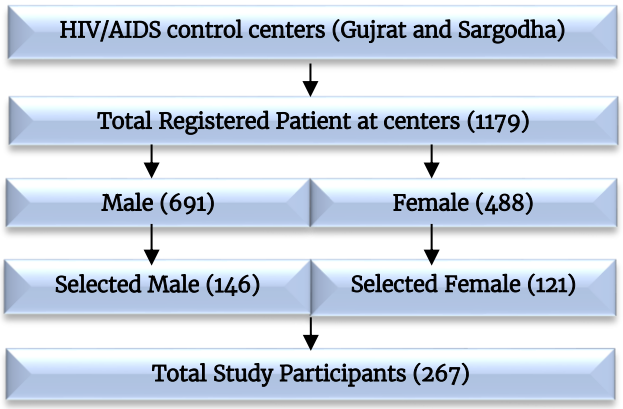
**H3.** A higher level of spirituality leads towards better physical health for patients living with HIV

## Materials and Methods

This quantitative study applied a cross-sectional survey method through the administration of structured questionnaires as a tool to collect primary data from participants. The target population was the patient registered at HIV/AIDS control centres in districts Gujrat and Sargodha. HIV/AIDS control centres provide medical, psycho-social assistance, and behavioural counselling, among others, to the patient living with HIV. The total patient registered at the said centre is 1179, and among this number, 691 were male, and 488 were female. Pakistan is a developing country with less research orientation, especially with regard to this sensitive issue. Researchers face a lot of hurdles, such as refusal, non-cooperative behaviour, and hiding actual responses, among many others. To ensure participation from both genders and HIV/AIDS control centres, researchers decided to select equal respondents from all portions by applying non-random convenience sampling methods and techniques. Allocation of equal quota to each portion was utilized to ensure that findings can be generalized. A total of 146 male and 121 female (total of 267) respondents were finalized for further analysis of this study. This research method was validated internationally for studying mental health, HIV/AIDS-infected people and social support programmes with high reliability and validity (Galvan et al., 2008)

### Figure 2

*Sample Design of the Study*




The instrument survey was constructed with three main sections; the first section of the instrument consisted of the socio-demographic background of participants. The second section contained a scale of spirituality/religious practices. Necessary amendments were incorporated according to local cultural norms, values and rituals along with nature and contact of this study. The third section comprises the impacts on the psycho-social and physical health of patients living with HIV. The responses were collected by using a 5-point Likert scale, with opting to range from strongly agreed to strongly disagree. Before actual data collection, pre-testing of instruments was done to assess their reliability and validity. Statistical software SPSS-21 was used to check the reliability of the instrument through Cronbach's Alpha test.

After completion of the process of data collection, a total of 267 respondents were finalized for further analysis with an adequate sample size having a 5% sampling inflate. The collected data were intensively screened, and specific coding and editing were done before entering into SPSS-21 for further analysis. Descriptive findings are presented in the form of tabulation, which indicates frequencies and percentages. Various univariate, bivariate and multivariate analyses were applied to predict the impacts of independent and dependent variables.

## Results/Findings

The basic objective of this research study is to confirm the role of spirituality as a source of strength, resilience and well-being for patients living with HIV/AIDS. For this, primary data was collected from HIV/AIDS control centres of districts Gujrat and Sargodha, and the results of the study were presented descriptively and inferentially. The findings regarding the socio-demographic background of participants are presented below in Table 1. For the rational discussion and coherent explanation of coping impacts on HIV patients, understanding socio-

demographic and background factors is necessary. For this purpose, researchers analyze the basic information regarding the participants, such as their gender, and age qualification, among others and present in numeric and percentages distribution.

**Table 1**

*Distribution of demographic characteristics*

| Demographic Characteristics | Description of characteristics | N | % |
|---|---|---|---|
| Gender | Male | 146 | 54.7 |
| | Female | 121 | 45.3 |
| | **Total** | **267** | **100** |
| Age (in years) | Up to 25 | 42 | 15.7 |
| | 26 – 35 | 77 | 28.8 |
| | 36 – 45 | 92 | 34.5 |
| | 46 – above | 56 | 21.0 |
| | **Total** | **267** | **100** |
| Marital Status | Single | 59 | 22.1 |
| | Married | 168 | 62.9 |
| | Separated/Divorced/Widow | 40 | 15.0 |
| | **Total** | **267** | **100** |
| Qualification | Primary | 92 | 34.5 |
| | Middle | 62 | 23.2 |
| | Matriculation | 62 | 23.2 |
| | Graduation | 26 | 9.7 |
| | Masters or above | 25 | 9.4 |
| | **Total** | **267** | **100** |
| Expected mode of HIV/AIDS infection | Intravenous drug use | 39 | 14.6 |
| | Sexual contacts | 72 | 27.0 |
| | Blood Transfusion | 35 | 13.1 |
| | Quack Problem | 34 | 12.7 |
| | Unknown reasons | 87 | 32.6 |
| | **Total** | **267** | **100** |

The distribution of demographic characteristics is presented in Table 1, which highlights that 54.7% of respondents were male and 45.3% of respondents were females. Out of the total, the maximum number of respondents, 34.5%, fall between the age of 36 to 45 years and 62.9% of patients were married. Findings indicate that 80.9% of respondents have poor qualifications; they have just completed their matriculation or below qualification. When the respondents were asked about their infection, a mixed response was received as only 27.0% reported they faced this epidemic due to unsafe sexual contacts, and 14.6% were infected due to intravenous use of drugs. There are 32.6% of respondents do not even know how they become victims of this chronic health problem.

**Table 2**

*Distribution of demographic characteristics*

| Demographic Characteristics | Description of characteristics | N | % |
|---|---|---|---|
| Occupation | Govt Job | 24 | 9.0 |
| | Private Job | 23 | 8.6 |
| | Personal Business | 36 | 13.5 |
| | Daily wages / Labor | 62 | 23.2 |
| | Unemployed | 122 | 45.7 |
| | **Total** | **267** | **100** |
| Attend Religious Service | Daily | 140 | 52.4 |
| | Once a week | 64 | 24.0 |
| | Once a month | 7 | 2.6 |
| | Rarely | 56 | 21.0 |
| | Never | 10 | 3.7 |
| | **Total** | **267** | **100** |
| Reading Holy books / Religious material | Yes | 159 | 59.6 |
| | No | 108 | 40.4 |
| | **Total** | **267** | **100** |

Table 2 highlighted that 45.7% of participants of this study were unemployed, 23.2% were working as daily wages/labour, and 17.6% had a public or private job. A maximum number of participants, 52.4%, reported that they attend religious services/prayers on a daily basis, and only 3.7% of respondents did not attend any type of religious activities ever. When respondents were asked about attachments with holy books (Quran) or religious material, 59.6% of respondents responded they had attachments, and 40.4% reported that they did not read religious material.

**Table 3**

*Association among independent, dependent and background variables of the study*

| | Gender | Marital Status | Education | Occupation | Monthly income | Living area | Attend religious serves | Prayer or Meditation |
|---|---|---|---|---|---|---|---|---|
| Spirituality / Religious Practices | 26.845* | 27.19* | 30.13** | 27.14* | 28.236* | 29.740** | 56.92** | 33.14** |
| Health Conditions of HIV Patients | 27.469* | 26.869** | 31.47** | 22.74** | 33.680** | 25.850** | 79.21** | 41.97** |

i. *Significance at 5% level ii **Significance at 1% level

It is also important to observe the strength of association between dependent, independent and background variables; Table 3 explains these relationships. Spirituality has associations with background factors such as gender, education, marital status, income, and occupation, among others. These background factors also have a significant association with the health conditions of patients living with HIV/AIDS.

**Table 4**

*Religious Coping Strategies Scale*

| Statement | SDA | DA | N | SA | A |
|---|---|---|---|---|---|
| | F (%) | F (%) | F (%) | F (%) | F (%) |
| You have faith and believe in God. | 1(4) | 5(1.9) | 1(4) | 100(37.5) | 159(59.4) |
| Do you have faith that spiritual/religious practices are useful for the prevention of recovery from diseases? | 3(1.1) | 9(3.4) | 4(1.5) | 44(16.5) | 205(76.8) |
| Do you listen to religious lectures to reduce your depression | 43(16.1) | 82(30.7) | 8(3.0) | 49(18.4) | 85(31.8) |
| Do you believe prayers have impacts on human health | 3(1.1) | 14(5.2) | 9(3.4) | 60(22.5) | 181(67.8) |
| Do you participate in religious practices for inner peace and connectedness with self | 3(1.1) | 13(4.93) | 8(3.0) | 63(23.6) | 180(67.4) |
| Do you think spirituality helps you in social adjustment and adaptability during diseases | 4(1.5) | 14(5.2) | 11(4.1) | 64(24.0) | 174(65.0) |
| Do you believe relation with spirituality contributes to a sense of wellbeing | 6(2.2) | 11(4.1) | 8(3.0) | 71(26.0) | 171(64.0) |
| Do you feel satisfied spending time with your religious leaders or inspirer | 5(1.9) | 12(4.5) | 7(2.6) | 69(25.8) | 174(65.2) |
| Do you feel satisfaction spending in the name of God | 3(1.1) | 9(3.4) | 4(1.5) | 44(16.5) | 205(76.8) |
| In your life, Inexperience in the Presence of the Divine or God | 31(11.6) | 4(1.5) | 3(1.1) | 169(63.3) | 60(22.5) |
| How much you feel betterment in your diseases with the help of spirituality | 2(7.0) | 22(8.2) | 2(7.0) | 116(43.6) | 125(46.8) |
| Do you feel religious practices help in distress and psychological discomfort | 12(4.5) | 24(9.0) | 5(1.9) | 83(31.1) | 143(53.6) |
| You have received encouragement and confidence in your spiritual beliefs | 7(2.6) | 21(7.9) | 9(3.4) | 81(30.3) | 149(55.8) |
| Your religious belief is what really lies behind your whole approach to life | 36(13.5) | 7(2.6) | 13(4.9) | 36(50.9) | 75(28.1) |
| Do you try to carry your religion over into all other dealings in your life | 61(22.8) | 42(15.7) | 116(43.4) | 19(7.1) | 29(10.9) |

Table 4 describes the scale with the percentage distribution of religious coping strategies of respondents/patients of HIV AIDS disease. Researchers select the Duke University scale for spirituality and make necessary changes according to the local culture, norms, rituals and ground realities, among others.

**Table 5**

*Impacts of coping strategies with respect to gender (CI-95%)*

| Variables | Male (n=146) | | Female (n=121) | | t-value | P | LL | UL |
|---|---|---|---|---|---|---|---|---|
| | M | SD | M | SD | | | | |
| Spirituality / Religious practices | .289 | .104 | .289 | .101 | 5.921 | .000*** | .084 | .494 |
| Health Condition of HIV Patients | .194 | .082 | .195 | .091 | 6.148 | .000*** | .019 | .371 |

***: P<0.01, ii. **:P<0.05,

Participants from both genders belong to different socio-demographic backgrounds and specific characteristics. With the intent to check the impacts of spirituality according to gender, researchers applied bivariate analysis, and the results are presented in Table 5. The finding indicates that spirituality has almost equal impacts on both genders, and significant positive relationships exist between males and females. Results presented p-value (.000***) at ***: P<0.01 level, which considers the best impacts.

## Analysis of Variance

The average comparison of study variables considered in the study, such as spirituality/religious coping strategies and health conditions of patients with HIV, indicates a significant interpretation and importance. The analysis of variance (ANOVA) is used for this purpose by assuming that all variables have equal effects. The normality of data is observed, and a test of homogeneity of group variances is performed before running ANOVA. Table 6 concludes that the averages of variables are not the same or do not have equal importance. Further, using the Post Hock test, it is concluded that all the pairs of well-being have different averages

**Table 6**

*Analysis of Variance (ANOVA) among study variables*

| | Sum of Squares | Df | Mean Square | F | Sig. | Post Hock |
|---|---|---|---|---|---|---|
| Between Groups | 3183.37 | 9 | 21371.179 | 119.714 | .000 | NEG<NO |
| Within Groups | 10242.80 | 1299 | 68.495 | | | |
| Total | 13525.53 | 1308 | | | | |

## Hypothesis Testing

For the purpose of hypothesis testing, data were analyzed by using multiple linear regression analysis. Regression analysis was applied to relate the dependent variable to a set of independent variables. The applied statistical analysis represents the results of the regression coefficient of spirituality/religion on the health conditions of patients living with HIV. The findings of the study highlighted that the overall model of the study is significant at the 1% level. Factors of independent variable such as religious

beliefs/faith, religious practices/prayers, attending spiritual leaders/inspirer, connectedness with nature / God, acceptance fate/fortune, and good deeds/sacrifices are the predictors statistically different from zero and had a significant and direct impact on health conditions of HIV infected patients. The statistical coefficient of the regression model indicates the supportive results; therefore, all three hypotheses, HI, H2, and H3, were accepted and supported with significant p-value 0.000 levels.

**Table 7**

*Analysis of multiple linear regression analysis for hypothesis testing*

| Factors of an independent variable (Spirituality) | Beta | Standard Error | t-value | p-value |
|---|---|---|---|---|
| Religious beliefs/faith | .324 | .299 | 4.013 | 0.000** |
| Religious practices/prayers | .298 | .371 | 3.190 | 0.000** |
| Attend spiritual leaders/inspirer | .271 | .437 | 4.208 | 0.000** |
| Connectedness with Nature / God | .241 | .382 | 3.761 | 0.000** |
| Acceptance of fate/fortune | .299 | .277 | 3.334 | 0.000** |
| Good deeds/sacrifices | .283 | .456 | 3.089 | 0.000** |

**: P<0.01, ii. *:P<0.05

## Regression Analysis

The results from regression analysis present the F-value and R square to understand the overall significant relationships among study variables as presented in the model Figure 1. The model of this research yielding significant p-value (p<0.01) and R square around 10% of the variance in spirituality was explained.

**Table 8**

*Summary of Regression Analysis*

| Regression statistics | F-Value | P-Value | Adj-R2 | Durbin-Watson test |
|---|---|---|---|---|
| Values | 27.099 | 0.000** | 0.895 | 1.981 |

Relationship between spirituality and health conditions

| Variables | Standardized Error of coefficient | t-value | Standardized Regression Coefficient (beta)(p-value) |
|---|---|---|---|
| Spirituality | 0.088 | 4.372 | 0.437 (0.000)** |

** P<0.01 ii. * P<0.05

Table 8 presents the results of regression analysis, which was applied to examine the relative importance of independent variables to check the impacts of dependent variables. Independent variables such as spirituality were included in the model, and R2 is called the coefficient of determination and indicates the explained variation in the dependent variable of the study. Findings show that the model has significant values such as (F=27.099, P=0.000). The regression coefficient (beta) of the model is 0.895, which shows the positive impacts of spirituality and health conditions of HIV patients.

## Discussion and Conclusions

This research study highlighted the impacts of spirituality on the health conditions of patients

living with HIV. The findings of the study indicate that, regardless of gender, better health conditions of HIV patients are strongly associated with spiritual/religious practices in Pakistan. This association not only reduces intensive disease depression but also eliminates the risk of infection. The findings of this study corroborate the existing literature (Dave et al., 2019; Boucher et al., 2020; Nigusso et al., 2021; Wagner et al., 2022; Nierotka et al., 2023) regarding mental, physical and social health association with spirituality.

Individuals living with HIV face numerous stressors with respect to the chronicity of diseases, social stigma and economic burden, among many others. Spirituality/religion helps to overcome psycho-social stressors, and in this study, researchers examined the higher mean related to the betterment of HIV patients, positive reappraisal, escape avoidance and dealing with problems. The coping strategies largely maintain confidentiality, optimism towards treatment, rationalization, interdependency and social support, spirituality and connectedness, self-confidence and avoidance of distraction, among many others.

Results of this study showed the prime challenge to people living with HIV is discrimination, societal stigma and behavioural issues, fears, worries, and over-thinking intensify psycho-social distress and severe consequences. Spirituality addresses the situation and positively contributes to the improvement of clinical care and treatment, fantasizing best possible solutions to address reality.

Contributing to the advancement of scientific knowledge, the researcher's focus on the coping model applied to individuals living with HIV is fundamental for healthcare professionals in the perspective of planning appropriate interventions and setting goals to deal with the real needs of HIV patients. The study contributes to the body of knowledge for the patient, families and health care professionals on the required needs, social support and behaviour for better treatment. This also tends to explore other mechanisms that intervene with the association between the health conditions of HIV patients and preventive methods.

## Recommendations

This study scrutinizes the relationship that can change life patterns and mould the personalities of individuals living with HIV. The concerns and stigmatization are not only with patients but also have serious consequences on their families and social structure. The need is to identify more specific, narrow and analytical coping strategies with respect to specific social, cultural and rituals of patients that recognize the basic factors linked with their social and psychological and provide basic support. It is strongly recommended that the base of coping strategies be increased by involving social, natural and physical discipline for coherent and efficient results.

The results from this study highlighted that the largest number of infected people have poor qualifications, so awareness intervention at a massive level is immediately prioritized by public departments and private organizations. There is a need to begin with small-scale studies and move to a larger field and longitudinal studies. Furthermore, the researchers may take into account gender, geographical difference, demographic background, rural and urban disparities and also different environments and reigns.

## Limitations

The study in hand possesses some limitations with respect to its scope, universe and sampling, among others. This study has incorporated some impacts on the health condition of patients living with HIV infection, such as psychological, social and physical. There is a need to address many other interrelated factors specifically, such as impacts on patient children, families and

occupations, among others. There are some aspects of the phenomenon that are prone to recall bias and desirability bias that would create ambiguous situations, so in-depth longitudinal studies can improve the required results. The participants who were approached only registered in HIV preventive centres, those who understand their HIV status and started treatment from established care centres may entirely differ from those not initiating care.

## References


Ahmed A, Osinubi MO, Fasiku MM, Uthman MM, Soyannwo T, Jimoh OS (2021). Coping strategies among patients attending HIV clinics in the North-central State of Nigeria. *Nigerian Journal of Clinical Practice, 24*(1), 104–109. https://doi.org/10.4103/njcp.njcp_380_20

Andriati, R., Sari Indah, F. P., & Pratiwi, R. D. (2023). Factors determining coping strategy in HIV/AIDS survival. *Malaysian Journal of Nursing*, *14*(03), 126-131. https://doi.org/10.31674/mjn.2023.v14i03.015

Ataro, Z., Mengesha, M. M., Abrham, A., & Digaffe, T. (2020). Gender differences in perceived stigma and coping strategies among people living with HIV/AIDS at jugal hospital, Harar, Ethiopia. *Psychology Research and Behavior Management*, *13*, 1191-1200. https://doi.org/10.2147/prbm.s283969

Bockrath, M. F., Pargament, K. I., Wong, S., Harriott, V. A., Pomerleau, J. M., Homolka, S. J., Chaudhary, Z. B., & Exline, J. J. (2022). Religious and spiritual struggles and their links to psychological adjustment: A meta-analysis of longitudinal studies. *Psychology of Religion and Spirituality*, *14*(3), 283-299. https://doi.org/10.1037/rel0000400

Bukhori, B., Hidayanti, E., & Situmorang, D. D. (2022). Religious coping strategies for people with hiv/Aids (Plwha) Muslims in Indonesia: A qualitative study with a telling-the-stories. *Heliyon*, *8*(12), e12208. https://doi.org/10.1016/j.heliyon.2022.e12208

Dilger, H., & Luig, U. (Eds.). (2022). *Morality, Hope and Grief: anthropologies of AIDS in Africa*. Berghahn Books.

Dunbar, W., Labat, A., Raccurt, C., Sohler, N., Pape, J. W., Maulet, N., & Coppieters, Y. (2020). A realist systematic review of stigma reduction interventions for HIV prevention and care continuum outcomes among men who have sex with men. *International Journal of STD and AIDS*, *31*(8), 712–723. https://doi.org/10.1177/0956462420924984

Filiatreau, L. M., Ebasone, P. V., Dzudie, A., Ajeh, R., Pence, B., Wainberg, M., Nash, D., Yotebieng, M., Anastos, K., Pefura-Yone, E., Nsame, D., & Parcesepe, A. M. (2021). Correlates of self-reported history of mental health help-seeking: A cross-sectional study among individuals with symptoms of a mental or substance use disorder initiating care for HIV in Cameroon. *BMC Psychiatry*, *21*(1). https://doi.org/10.1186/s12888-021-03306-y

Grill, K. B., Wang, J., Cheng, Y. I., & Lyon, M. E. (2020). The role of religiousness and spirituality in health-related quality of life of persons living with HIV: A latent class analysis. *Psychology of Religion and Spirituality*, *12*(4), 494-504. https://doi.org/10.1037/rel0000301

Hailegabriel, K., & Berhanu, Z. (2022). Caregiving challenges and coping strategies of family caregivers for relatives diagnosed with bipolar disorder in Ethiopia. *Families in Society: The Journal of Contemporary Social Services*, *104*(1), 5-19. https://doi.org/10.1177/10443894221129325

Jolle, J., Kabunga, A., Okello, T. O., Kadito, E. O., Aloka, J., Otiti, G., Aluku, A. A., Kumakech, E., & Udho, S. (2022). HIV-related stigma

experiences and coping strategies among pregnant women in rural Uganda: A qualitative descriptive study. *PLOS ONE*, *17*(10), e0272931. https://doi.org/10.1371/journal.pone.0272931

Julio Cesar Tolentino, J., Pedro De Mello Vianna Pedrosa, G., Larissa Cristine De Souza, L., Manuella Caroline Dutra Frazão, A., & Mariana Beiral, H. (2020). Spirituality in suicide prevention among people living with HIV/AIDS - A review. *Journal of Mood Disorders and Therapy*, *2*(2). https://doi.org/10.36959/418/582

Khademi, N., Saeidi, S., Zangeneh, A., Saeidi, F., & Choobtashani, M. (2020). The relationship between life satisfaction and quality of life among people living with HIV/AIDS in Kermanshah-west of Iran. *Health & Social Care in the Community*, *28*(6), 2218-2224. https://doi.org/10.1111/hsc.13034

Liu, K., Cheng, F., Dong, H., Dong, X., & Xu, J. (2021). Sexual orientation and quality of life of people living with HIV/AIDS in China: Evidence from an institutional-based cross-sectional study. *Quality of Life Research*, *31*(1), 125-134. https://doi.org/10.1007/s11136-021-02877-3

Pan, S. W., Fairley, C. K., Chow, E. P., Zhang, Y., Tieosapjaroen, W., Lee, D., & Ong, J. J. (2023). Supernatural beliefs, religious affiliations, and HIV testing among recently arrived Asian-born men who have sex with men in Australia. *AIDS Care*, 1-6. https://doi.org/10.1080/09540121.2023.2179012

Parcesepe, A. M., Filiatreau, L. M., Gomez, A., Ebasone, P. V., Dzudie, A., Pence, B. W., Wainberg, M., Yotebieng, M., Anastos, K., Pefura-Yone, E., Nsame, D., Ajeh, R., & Nash, D. (2023). HIV-related stigma, social support, and symptoms of mental health disorders among people with HIV initiating HIV care in Cameroon. *AIDS Patient Care and STDs*, *37*(3), 146-154. https://doi.org/10.1089/apc.2022.0187

Reid, R., & Dale, S. K. (2023). Structural equation modeling of microaggressions, religious and racism-related coping, medication adherence, and viral load among Black women living with HIV. *Journal of Behavioral Medicine*. https://doi.org/10.1007/s10865-023-00403-z

Rich, C., Mavhu, W., France, N. F., Munatsi, V., Byrne, E., Willis, N., & Nolan, A. (2022). Exploring the beliefs, experiences and impacts of HIV-related self-stigma amongst adolescents and young adults living with HIV in Harare, Zimbabwe: A qualitative study. *PLOS ONE*, *17*(5), e0268498. https://doi.org/10.1371/journal.pone.0268498

Saberi, P., Stoner, M. C., Ming, K., Lisha, N. E., Hojilla, J. C., Scott, H. M., Liu, A. Y., Steward, W. T., Johnson, M. O., & Neilands, T. B. (2022). The effect of an HIV preexposure prophylaxis panel management strategy to increase preexposure prophylaxis prescriptions. *AIDS*, *36*(13), 1783-1789. https://doi.org/10.1097/qad.0000000000003283

Sanagouye Moharer, G., Raisi, M., & Sultan Ahmadi Moghaddam, F. (2018). Relationship between Religious Coping Styles and Quality of Life in HIV-Positive Patients. *Religion and Health*, *5*(2). Retrieved from http://jrh.mazums.ac.ir/article-1-446-en.html

Wei, L., Yan, H., Guo, M., Tian, J., Jiang, Q., Zhai, M., Zhu, B., Yin, X., Liao, Y., & Yu, B. (2022). Perceived HIV stigma, depressive symptoms, self-esteem, and suicidal ideation among people living with HIV/AIDS in China: A moderated mediation modeling analysis. *Journal of Racial and Ethnic Health Disparities*, *10*(2), 671-679. https://doi.org/10.1007/s40615-022-01255-0