



SOCIAL SUPPORT MEDIATES THE RELATIONSHIP BETWEEN HIV STIGMA, DEPRESSION, AND QUALITY OF LIFE AMONG PEOPLE LIVING WITH HIV

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ABSTRACT

Background: HIV/AIDS remains a major global public health challenge, affecting more than 38 million people worldwide. In Pakistan's conservative sociocultural context, stigma related to HIV is widespread and contributes substantially to psychological distress among people living with HIV (PLWH), leading to depression and poor quality of life (QoL). Social support may act as a protective factor by buffering the adverse effects of stigma on mental health and well-being.

Objective: To examine the mediating role of social support in the relationship between HIV-related stigma, depression, and quality of life among PLWH attending a tertiary care hospital in Rahim Yar Khan.

Study Design and Setting: This cross-sectional analytical study was conducted at the HIV Center Sheikh Zayed Medical College/Hospital, Rahim Yar Khan from 12-2-2024 to 15-9-2024.

Methodology: A total of 100 diagnosed HIV-positive patients were recruited using a convenience sampling technique. Data were collected through validated questionnaires assessing HIV stigma, perceived social support, depressive symptoms, and quality of life. Mediation analysis was performed to evaluate the indirect effects of social support on the relationships between stigma and depression, and stigma and QoL.

Results: Higher HIV-related stigma was significantly associated with increased depressive symptoms and reduced QoL. Social support significantly mediated the relationship between HIV stigma and depression ($\beta = 3.21$, $p < 0.01$). Additionally, social support demonstrated full mediation between stigma and QoL ($\beta = 4.13$, $p < 0.01$), indicating that higher perceived social support was associated with lower depression levels and better quality of life despite the presence of stigma.

Conclusion: Social support plays a crucial protective role in mitigating the negative psychological impact of HIV-related stigma among PLWH. Integrating social support-focused interventions, such

as peer support and family-based counseling, into routine HIV care may significantly improve mental health and quality of life, particularly in rural and high-stigma settings.

Keywords: Social Support, Depression Quality of Life, Mediation AIV AIDs Patients

Introduction

HIV/AIDS is a pressing public health concern around the globe as estimated by 38 million populations as of the year 2021.¹ Although there have been many breakthroughs about its treatment and management, the disease still carries an awful burden of social stigma within itself, especially among more conservative societies where people remain oblivious to the myth that they harbor about HIV due to misconceptions or taboos in that particular culture. This form of stigma affects not just a patient's physical health but is significantly harmful to his or her mental health as well, ultimately triggering conditions like depression and anxiety that severely impact the patient's QoL.² The consequences of stigma are much worse for Pakistanis, who belong to a predominantly conservative society and have very little public awareness about HIV/AIDS. The most common reasons for discrimination and social ostracism of PLWH are ignorance about the mode of HIV transmission and morality.³ Patients diagnosed with HIV aids have been experiencing social isolation and discrimination, from close friends and family members, thus amplifying their sense of loneliness and hopelessness.⁴ Given the nature of cultural and social forces, HIV-infected patients oppose a challenge of psychosocial nature other than their medical treatment. HIV Aids patients faced many challenges and difficulties in their treatment in under development countries as like in Pakistan. This wide-ranging stigma has been linked to the exacerbation of psychopathology such as depression among PLWH. Such patients often experience depression due to a sense of isolation, rejection, and internalized stigma that not only erodes their psychological health but also disables them from adhering to treatment and managing their illness.⁵ Even though anti-retroviral therapies have improved the physical health and survival of HIV-positive persons, mental health outcomes remain an area that urgently needs attention. Improving the quality of life for patients overall and ensuring comprehensive HIV care is only possible by addressing these mental health issues.⁶

HIV stigma is a complex, multi-dimensional phenomenon encompassing both perceived and internalized stigma that may greatly influence psychological outcomes for PLWH. Stigma in HIV-positive individuals presents as societal prejudice, discrimination, and internalized shame which contribute to increased stress and psychological distress.⁵ Internationally, the HIV stigma and mental health impact are well-noted and have gained much literature research concerning its association with depressive, anxiety, and PTSD disorders.⁷ In a meta analysis it is evident that stigma related to HIV has shown a constant correlation with the symptoms of depression and also how much PLWH was affected by this stigma which resulted in causing mental disorders in them.⁸ Moreover, the concept of internalized stigma or internalization of unfavorable beliefs in society about themselves is well established to contribute toward low self-esteem and low emotional resilience in PLWH.³

In Pakistan, social and cultural aspects of HIV are based on moral judgment and misconceptions concerning the mode of transmission, which further burdens the affected person with psychological stress.⁹ Studies from other conservative societies in the Middle East and South Asia depict that stigma leads to grave isolation and mental health that often cause persons to exclude themselves from social networking.² In Pakistan, PLWHs are normally branded as "immoral" or "sinners", thus there is significant discrimination between health settings, working places, and social areas.¹⁰ This social ostracism heightens sentiments of loneliness and powerlessness, both established precursors for the development of depression-related symptoms and poor quality of life. However, while there is increasing evidence revealing an association between stigma related to HIV and the dimension of psychopathology, few studies examine the experiences of PLWH within the rural Pakistan region.¹¹ This paper attempts to fill this gap by expanding the specific experiences of patients in Sheikh

Zayed Hospital, Rahim Yar Khan, and discussing how social support may reduce the associated negative psychological impact of HIV-related stigma.

Social support is considered one of the most positive factors in reducing psychological distress experienced by persons suffering from stigmatizing conditions, chronic illness, or other debilitating life problems.¹² Social support has been described as involving all types of help, namely, emotional or affective (empathy and love), instrumental or practical (tangible aid), and informational help (guidance and counseling), which in turn can contribute to building resiliency in the face of adversity. Generally, across all domains of study, PLWHs with strong social support ties have demonstrated better mental health effects including fewer symptoms of depression and higher quality of life. Rzeszutek's research study pointed out that PLWH, who possess strong family and friend support, are reported to exhibit significantly lower levels of stress and symptoms of depression, compared to PLWH possessing limited social support. Besides that, social support is considered an influence on the coping ability where it offers emotional support along with a sense of belonging, which is quite very critical for PLWH at moments of stigma.¹³

The social support networks in Pakistan are significantly dependent on family structure, social and economic status, as well as religious beliefs and practices. Families form the main support networks, and close-knit family dynamics can act as a strong buffer against the psychological effects of stigma. However, where family support dries up or is withdrawn upon stigma-related shame, PLWH may be even more vulnerable to mental health problems.² In the absence of a supportive system, isolation and stigma surrounding HIV can exacerbate the adverse effects of favorable mental health outcomes. Moreover, in addition to family support, community-based care, and peer networks are instrumental in improving the psychosocial well-being of PLWH. Peer group interventions, in particular, allow participants to draw from experiences and find sympathies and common ground among others who suffer similarly.¹⁴ The current study explores social support within this rural healthcare setting and aims to highlight both formal and informal support networks' role in enhancing patient well-being.

Quality of life (QoL) is a comprehensive measure of well-being that encompasses physical, psychological, and social dimensions. For PLWH, stigma often results in social exclusion and internalized shame, which erodes their sense of purpose and belonging, further diminishing QoL.⁶ Depression, therefore, arising as a consequence of such stigma, may further worsen the negative health impact so that it becomes hard for the PLWH to keep up with antiretroviral medication while keeping hope for the future alive. Literature postulates that the mediator between stigma and QoL is social support as mediated by emotive comfort, coping mechanisms, and the alleviation of social isolation. A study by Rzeszutek et al.¹³ showed a result that HIV-positive clients who had high social support had significantly better QoL scores than those of patients without such support; however, this difference should not be associated with the type of stigma they were facing at any point in time in their lives. These conclusions were drawn on the general multiple dimensions of QoL: physical health, psychological well-being, and social relationships.

Some studies have examined the relationship between QoL among PLWH in Pakistan. However, only a handful of studies have investigated the role of social support within this relationship. The QoL among patients who are HIV positive and belong to the urban population showed stronger social networks, though stigma continues to be an important factor. This might not necessarily apply to rural populations due to the cultural influence on limited support systems and scarce resources. A deeper understanding of how social support functions will perhaps provide the right input into intervention design and tailor those to regions, like Rahim Yar Khan, which is culturally very hostile about stigma. Assessing in the present study if indeed social support is an intermediary factor that interconnects the chains between stigma, depression, and QoL may provide additional value to extant literature with regards to this. These mediating effects could be identified to inform interventions aimed at enhancing social support networks to improve QoL outcomes for PLWH.¹⁵

Problem Statement

The HIV stigma is especially potent in conservative regions like Rahim Yar Khan, where an HIV diagnosis is not only associated with a health challenge but also heavy social marginalization. Stigmatization may lead to severe psychological distress in the form of depression and lowered self-esteem, further degrading QoL for PLWH. Given that stigma cannot be fully eradicated, the search for possible mechanisms to buffer the effects of stigma is important. Social support has been recognized as a potential protective factor that may alleviate the psychological burden associated with HIV stigma. This study proposes to investigate whether social support can mediate the impact of HIV stigma on depression and QoL amongst HIV-positive patients attending services at Sheikh Zayed Hospital.

Significance of the study

Although vast amounts of literature exist about HIV stigma and mental health outcomes, very little research has been conducted focusing on Pakistan, especially within the rural setting of Rahim Yar Khan. Much of the existing literature involves urban-based populations, for whom support systems and services for mental health may be more accessible (7). This paper adds to the literature as a study of unique socio-cultural dynamics that affect PLWH in a rural Pakistani setting and examines how social support functions within this context.

Findings from this study may have important implications for healthcare providers, policymakers, and social workers working with HIV-positive populations in Pakistan. This research identifies social support as a key mediating factor and thus presents an opportunity for psychosocial interventions aimed at improving the social support networks of people to enhance their mental health outcomes in the event they test positive for HIV. Support-based interventions, including peer counseling programs and family therapy, might help the healthcare environment be more supportive of the medical and psychological needs of HIV-positive patients. Moreover, these findings might help in devising policies that target HIV stigma reduction through community sensitization campaigns, thereby making the environment more friendly to PLWH in Pakistan.

Objectives

1. To determine whether social support alleviates depressive symptoms by acting as a mediator of the relationship between HIV-related stigma and depression among PLWH.
2. To determine whether interventions aimed at increasing social support enhance the quality of life for PLWH by moderating the HIV-related stigma-quality-of-life outcome relationship.
3. To assess whether higher levels of social support increase the dose-response effects of enhancing mental health outcomes that mitigate against the negative effects of HIV-related stigma.

Hypotheses

Given the findings from prior studies, this study proposes the following hypotheses:

1. **Hypothesis 1:** Social support will mediate the relationship between HIV-related stigma and depression among PLWH, reducing depressive symptoms associated with perceived and internalized stigma.
2. **Hypothesis 2:** Social support will mediate the relationship between HIV-related stigma and quality of life, enhancing QoL despite the presence of stigma.
3. **Hypothesis 3:** Higher levels of social support will attenuate the negative impacts of stigma more effectively than lower levels, indicating a dose-response relationship between support and mental health outcomes.

Methodology

Study Design and Participants

In this study, a cross-sectional research design has been used. A purposive sample of 100 patients was collected from the HIV Center, Sheikh Zayed Hospital, Rahim Yar Khan.

Inclusion Criteria

- Patients diagnosed with HIV positive for at least three months
- Adult patients aged 18 years and above.

Exclusion Criteria:

- Comorbidity with any other physical or psychological disorder.
- Patients in the terminal stages will also not be included in the present sample.

Table 1 *Frequency Distribution of Demographic Questionnaire (N=100)*

Respondent's Characteristics		f (%)
Gender	Male	70 (70)
	Female	30 (30)
Education	Uneducated	44 (44)
	Matric	38 (38)
	Intermediate	9 (9)
	Graduation	8 (8)
	Postgraduate	1 (1)
Age	16 to 25	49 (49.0)
	26 to 35	42 (42.0)
	36 to 45	6 (6.0)
	46 to 55	3 (3.0)
Professional	Employed	51 (51)
	Unemployed	49 (49)

Data Collection Tools

1. **HIV Stigma Scale (10):** The HIV Stigma Scale is a validated 10-item instrument measuring perceived and enacted stigma on a Likert scale (1 = strongly disagree to 5 = strongly agree). This scale has been widely used in HIV-related research to assess levels of stigma and was adapted to the Pakistani context through translation and cultural validation.
2. **Social Support Questionnaire (SSQ) (11):** The SSQ assesses the perceived availability of social support across emotional, instrumental, and informational domains. It consists of items rated on a 5-point scale, with higher scores indicating greater perceived support.
3. **Patient Health Questionnaire (PHQ-9) (12):** The PHQ-9 is a standardized tool for assessing depression severity, validated in multiple languages and contexts, including South Asia. Participants rate each item on a 4-point scale (0 = not at all to 3 = nearly every day), with higher scores indicating greater depression severity.
4. **World Health Organization Quality of Life (WHOQoL) Scale (13):** The WHOQoL scale, modified for HIV-positive populations, measures QoL across physical, psychological, and social domains. Participants rate items on a scale from 1 to 5, with higher scores reflecting better QoL.

Procedure

After IRB clearance and authorization from the HIV center's Director, questionnaires were distributed to participants individually. Rapport was also established by the use of a study information sheet, assurances of anonymity, and the offer of free counseling in the event of psychological discomfort. One participant completed the data-gathering process in around 20 to 25 minutes. Following data collection, a debriefing session was held to see if there were any questions or concerns about the technique or outcomes. The participants also received a formal thank you note for their time and voluntary engagement in scientific research, as well as for filling a knowledge vacuum.

Ethical Consideration:

The research was carried out at the HIV Center, Sheikh Zayed Hospital, Rahim Yar Khan after the approval of the Institutional Review Board. Permission for data collection was also sought from the Director of the AIDS center. After approval, the intent and reasoning of the present research were clarified to participants through the research information sheet. Written informed consent was sought from them. Participants were told about their voluntary participation and the right to withdraw at any time without any reservation on the part of the researchers or doctors. Psychological counseling was also offered to the participants in case of any stress or discomfort. Data confidentiality and anonymity of the participants were ascertained.

Results

Table 2 Mean Scores, Standard Deviations, and Correlation Analysis Among Study Variables (N=100)

Variable	Mean	Standard Deviation	Correlation with Stigma (r)	Correlation with Depression (r)	Correlation with QoL (r)
1. HIV Stigma	2.9	0.8	—	0.56**	-0.47**
2. Social Support	3.5	1.1	-0.52**	-0.48**	0.60**
3. Depression (PHQ-9)	8.7	3.2	0.56**	—	-0.58**
Quality of Life (WHOQoL)	75.3	12.5	-0.47**	-0.58**	—

The correlation analysis indicates a significant positive correlation between HIV stigma and depression ($r = 0.56$, $p < 0.01$), as well as a significant negative correlation between stigma and QoL ($r = -0.47$, $p < 0.01$). Social support was negatively correlated with both stigma ($r = -0.52$, $p < 0.01$) and depression ($r = -0.48$, $p < 0.01$), and positively correlated with QoL ($r = 0.60$, $p < 0.01$).

Table 3 Mediation Analysis Results

Relationship	Estimate (β)	p-value	Mediation Type
HIV Stigma $\rightarrow$ Depression	3.21	< 0.01	Significant Mediation
HIV Stigma $\rightarrow$ Quality of Life (QoL)	4.13	< 0.01	Full Mediation

Table 3 the mediating role of social support. Results indicate that social support significantly mediated the relationship between HIV stigma and depression ($\beta = 3.21$, $p < 0.01$) and fully mediated the relationship between stigma and QoL ($\beta = 4.13$, $p < 0.01$).

Discussion

The study supports the hypothesis that social support mediates the relationship between HIV-related stigma and mental health outcomes among PLWH. Consistent with previous studies, results indicate that higher levels of social support are associated with reduced depressive symptoms and improved QoL. This finding aligns with global research on the buffering effects of social support against stigma-related stress.⁷

The strong correlation between social support and QoL reinforces the notion that social support networks can mitigate the psychological impacts of HIV stigma. Patients who perceived higher support from family, friends, or community members reported fewer depressive symptoms and enhanced QoL, despite the stigma they encountered. These findings are significant for HIV care providers in Pakistan, underscoring the importance of integrating psychosocial support into HIV care plans.⁴ these findings suggest that healthcare providers at Sheikh Zayed Hospital and similar rural healthcare settings should prioritize social support as a key element in their approach to HIV

care. Potential interventions could include establishing peer support groups, offering family counseling, and fostering partnerships with community organizations to build a more inclusive support network. Additionally, targeted training for healthcare workers on the importance of social support could enhance the quality of care provided to PLWH.¹⁷ This study contributes to the theoretical understanding of social support as a mediator in the stigma-mental health relationship. By validating social support's buffering effect within a conservative Pakistani context, the study adds to existing models that recognize social support as a critical factor in resilience for stigmatized populations. These findings support the expansion of the social support theory to include the specific cultural and societal dimensions present in Pakistan.

The cross-sectional nature limits the ability to infer causality between stigma, social support, depression, and QoL.¹⁸ Data were collected from a single hospital in a rural area, which may limit the generalizability of results to other settings. The reliance on self-report instruments introduces the possibility of response bias, especially given the sensitivity of the topics addressed. Future studies should consider a longitudinal design to better establish causal relationships among stigma, social support, and mental health outcomes. Expanding research to multiple hospitals across diverse regions in Pakistan would improve generalizability and provide a more comprehensive understanding of HIV stigma across varying cultural contexts. Additionally, qualitative research could offer deeper insights into the specific types of social support that are most beneficial for PLWH in rural Pakistan.

Conclusion

The results of this study underscore the critical role that social support plays in mediating the adverse psychological impacts of HIV stigma on depression and QoL among PLWH. Healthcare providers and policymakers are encouraged to incorporate support-centered interventions, such as community-based support groups and peer counseling, to alleviate the mental health burden on HIV-positive individuals in Pakistan.

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