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Resilience and social isolation in people living with HIV: a case study in Iran

Mehri Lotfalizadeh¹, Amirreza Sabzi^{2*}, Jamileh Farokhzadian^{3*} and Nazanin Tabebordbar⁴

Abstract

Objective People living with HIV (PLHIV) often face increased vulnerability due to factors like social isolation and reduced resilience. These factors can negatively impact health outcomes, quality of life, and well-being for both PLHIV and their families. Therefore, healthcare providers should carefully assess these variables when providing care for PLHIV. This study evaluated the levels of resilience and social isolation among PLHIV.

Results PLHIV demonstrated high levels of resilience (77.16 ± 18.78) and moderate levels of social isolation (52.77 ± 6.63). Additionally, a strong inverse correlation was found between resilience and social isolation ($r = -0.60$, $p < 0.001$). Given the results, it is imperative for health policymakers, healthcare providers, and psychologists to prioritize strategies that enhance resilience and reduce social isolation among PLHIV.

Keywords AIDS, People living with HIV, Resilience, Social isolation

Introduction

Living with HIV presents significant psychological and emotional challenges for individuals [1, 2]. One of the primary psychological challenges for people living with HIV (PLHIV) is the high level of perceived stress associated with factors such as diagnosis, disclosure, breach of confidentiality, and treatment course [3–5]. Stressful experiences among PLHIV can have detrimental consequences, including decreased adherence to antiretroviral drugs, increased mortality, opportunistic infections, substance abuse, and risky sexual behaviors, all of which are

risk factors for individual health, family well-being, and public health [6]. However, individual responses to stress vary widely. Some individuals may develop psychiatric problems such as posttraumatic stress disorder, while others may experience transient psychological symptoms. Additionally, some individuals may not report any symptoms at all. These varying responses can be attributed to individual differences in adaptability and resilience [7].

Resilience, characterized by adaptability and the ability to navigate challenges, is a dynamic process triggered by adversity that leads to positive outcomes [8–10]. Based on the Resilience in Illness Model (RIM) on chronic patients, resilience is affected by both protective and risk factors. If protective factors cannot withstand adverse events, resilience will decrease; on the contrary, resilience will sustain balance and even improve. Social support, courageous coping, spiritual perspective, hope, and family environment are as important protective factors of resilience, and illness-related distress (uncertainty and symptom distress) and defensive coping are known as the risk factors that can negatively affect resilience [11].

*Correspondence:

Amirreza Sabzi

Amirrezasabzi98@gmail.com

Jamileh Farokhzadian

farokhzadian2010@yahoo.com; j.farokhzadian@kmu.ac.ir

¹Reproductive and Family Health Research Center, Kerman University of Medical Sciences, Kerman, Iran

²School of Medicine, Shiraz University of Medical Sciences, Shiraz, Iran

³Nursing Research Center, Kerman University of Medical Science, Kerman, Iran

⁴Shahid Rajaei Hospital, Shiraz University of Medical Sciences, Shiraz, Iran



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Individuals with higher resilience are better equipped to cope with traumatic events and emotional distresses than those with lower resilience [12]. According to RIM, resilience can serve as a protective factor against the negative effects of disease diagnosis and labeling [11]. Employing resilience strategies enables individuals to respond better to threatening and unpleasant events [13]. Resilience not only protects PLHIV by enhancing positive health behaviors such as active engagement in healthcare and adherence to antiretroviral treatment but also mitigates anxiety, trauma, and stress, leading to improved mental health and physiological function [14].

PLHIV often face stigma and rejection from friends and family, contributing to their social isolation [13, 15]. Social isolation occurs when PLHIV lose communication and interactions with others, leading to reduced participation in formal and informal groups [5, 16]. This isolation can have negative consequences such as disconnection from healthcare, disease progression, and the spread of infection [17]. Additionally, social isolation and low resilience can impact PLHIV's physical health, mental well-being, and overall quality of life [7, 18], hindering the achievement of 90-90-90 goals [19].

A review of the literature in different settings and cultures has shown varying levels of resilience [7, 13, 20] and social isolation among PLHIV [21, 22]. Studies have found that enhancing resilience in PLHIV can reduce stress levels and social isolation [8]. Research has linked social isolation to higher mortality rates of PLHIV, highlighting the urgent need for resilient interventions [17]. Additionally, researchers have shown that social support, strong marital and familial relationships strengthen the resilience of PLHIV when facing the challenges associated with the disease [23–25].

PLHIV often face vulnerability due to social stigma and isolation. Resilience and social isolation are important factors influencing the physical health, mental well-being, and overall quality of life for PLHIV. These factors can be influenced by environmental and cultural conditions. However, limited studies have addressed the correlation between resilience and social isolation among PLHIV in Iran. Conducting studies in different societies can provide comprehensive information about resilience and social isolation among PLHIV. Moreover, the results of such studies can be used to discover the health-promoting factors and design appropriate interventions for enhancing resilience and alleviating social isolation of PLHIV. Therefore, this study evaluated the correlation between resilience and social isolation among PLHIV.

Materials and methods

Study design and setting

This study was conducted at a behavioral disease counseling center affiliated with Kerman University of Medical

Sciences in southeastern Iran. We chose a cross-sectional study design due to its relatively low cost, quickness, ability to provide information on multiple variables from a population at a single point in time. This design can also guide public health planning.

Sampling

The target population included all PLHIV who were actively receiving care at the specified center ($N=176$). The inclusion criteria were a minimum of six months since diagnosis, the ability to read and write, and an age of 18 years or older, while the exclusion criteria included immigration, death, and incomplete questionnaires. Sampling techniques was convenience sampling, which involves selecting participants from the target population based their accessibility. A sample size of 123 participants was estimated considering the test power of 80%, $d=0.05$, and $\alpha=0.05$.

Measurement tools

Demographic questionnaire

This questionnaire included 12 items (see Table 1).

The Connor-Davidson resilience scale (CD-RISC)

Connor and Davidson (2003) [26] developed the CD-RISC with 25 items and five subscales: perception of individual competence, high standards, and tenacity, trust in one's instincts, tolerance of negative affect, and strengthening effects of stress, positive acceptance of change and secure relationships, control, and spiritual influences. Each item is scored on a Likert scale ranging from zero (not true at all) to five (true nearly all of the time), with total scores ranging from 0 to 100. To facilitate comparisons with other studies, we categorized scores as follows: 0–34 as low resilience, 35–68 as moderate resilience, and above 68 as high resilience. The reliability of the original CD-RISC was confirmed through test-retest correlation ($r=0.87$) and internal consistency ($\alpha=0.89$), while its validity was confirmed through construct and convergent validity.

We utilized the Iranian version of the CD-RISC. Iranian researchers reported a Cronbach's alpha of 0.94 for the reliability and exploratory and confirmatory factor analyses to validate the psychometric properties of the CD-RISC [27].

The University of California at Los Angeles loneliness scale (UCLA loneliness scale)

The scale consists of 20 items and is rated on a 4-point Likert scale (never, rarely, sometimes, and always), with the scores of ten items (1, 5, 6, 9, 10, 15, 16, 19, and 20) being reversed. The total score ranges from 20 to 80. To facilitate comparisons with other studies, we categorized scores as follows: 20–40 as low social isolation, 41–60 as

Table 1 Demographic information of the PLHIV

Variables	Categories	n	%
Gender	Female	60	48.8
	Male	63	51.2
Marital status	Single	24	19.5
	Married	56	45.5
	Widowed	25	20.3
	Divorced	18	14.6
Education level	Uneducated	7	5.7
	Elementary	29	23.6
	Upper secondary	27	22
	Diploma	42	34.1
	Bachelor's degree	16	13
	Above bachelor	2	1.6
Job	Housewife	45	36.6
	Worker	14	11.4
	Employed	15	12.2
	Self-employed	36	29.3
	Retired	4	3.3
	Unemployed	9	7.3
Number of children	0	27	22
	1	32	26
	2	21	17.1
	3	34	27.6
	> 3	9	7.3
Place of residence	City	103	83.7
	Suburb	7	5.7
	Village	13	10.6
Housing status	Owner	65	52.8
	Leaseholder	35	28.5
	Government-leaseholder	5	4.1
	Others	18	14.6
Insurance coverage	Yes	85	69.1
	No	38	30.9
Drug abuse	Yes	21	17.1
	No	102	82.9
Family support	Yes	79	64.2
	No	44	35.8
Number of referrals to the counseling center	Monthly	17	13.8
	3 months	85	69.1
	6 months	17	13.8
	Yearly	4	3.2
Income	< 48 \$	35	28.5
	48–95 \$	30	24.4
	119–167 \$	32	26
	> 167 \$	27	21.1
Age	Mean		SD
		45.34	9.13

moderate social isolation, and above 60 as high social isolation. Researchers established the reliability of original scale through test-retest methods ($r=0.87$) [28]. We utilized the Iranian version of the scale, which has been validated through Cronbach's alpha (86%), expert opinions, and construct and convergent validity [29].

Table 2 Scores of resilience and social isolation in PLHIV

Variables	Categories	Mean	SD
Resilience	Perception of individual competence	28.28	7.10
	Trust in one's instincts, tolerance of negative affect	22.86	5.67
	Positive acceptance of change, and secure relationships	16.43	4.65
	Control	9.59	3.37
	Spiritual influences	8.09	2.03
	Total resilience	77.16	18.78
	Social isolation	52.77	6.63

Table 3 Correlation between resilience and social isolation in PLHIV

Variables		Social isolation
Resilience	Perception of individual competence	$r = -0.49$ $p < 0.001$
	Trust in one's instincts, tolerance of negative affect	$r = -0.53$ $p < 0.001$
	Positive acceptance and secure relationships	$r = -0.56$ $p < 0.001$
	Control	$r = -0.53$ $p < 0.03$
	Spiritual influences	$r = -0.23$ $P = 0.008$
	Total resilience	$r = -0.60$ $p < 0.001$

Data analysis

Data were analyzed by SPSS 21. The normality of the variables was examined using the Kolmogorov–Smirnov test. Descriptive statistics such as frequency, percentage, mean, and standard deviation (SD) were used to deal with the PLHIV' demographic characteristics, resilience and social isolation. The Pearson correlation coefficient was applied to investigate the correlation between resilience and social isolation.

Results

A total of 123 PLHIV with a mean age of 45.34 ± 9.13 years participated in the study (Table 1).

According to the scale scoring, PLHIV demonstrated high levels of resilience (77.16 ± 18.78) and moderate levels of social isolation (52.77 ± 6.63) (Table 2).

Resilience and its subscales demonstrated strong inverse correlations with social isolation ($r = -0.60$, $p < 0.001$), indicating that higher levels of resilience were associated with lower levels of social isolation (Table 3).

Discussion

The study found that PLHIV in this sample exhibited high levels of resilience, consistent with findings from previous research [7, 13, 20]. However, some researchers have reported low resilience among participants [30, 31].

Resilience is a crucial resource for PLHIV, as it enhances health-promoting behaviors such as healthy eating, regular exercise, and adherence to treatment. Individuals with high resilience can better understand the long-term purposes of successful HIV management and are motivated to achieve these goals [13, 32]. Various factors can contribute to resilience including self-soothing techniques, friendships, intimate relationships, support, problem-solving skills, and emotional regulation [33–36].

The study found that PLHIV experienced moderate levels of social isolation. Social isolation differs from social integration, which involves having a supportive social network [37]. Research has consistently shown moderate levels of social isolation among PLHIV [21, 22]. Human interactions and communication are essential for understanding the significance of social life and coping with life challenges [38]. Strong social networks can reduce risky behaviors and prevent negative appraisals, making social support a protective factor against PLHIV [39].

The results revealed a strong inverse correlation between resilience and social isolation, which aligns with findings from several studies [38, 40]. Another study reported that social support was positively related to resilience. According to the RIM, it seems that whenever a person engages in emotional and avoidant coping, he/she tries to manage these emotional situations with courageous coping strategies. Moreover, perceived social support as a protective factor can effectively regulate a person's mental pressure and improve their physical and mental health, and in turn develop resilience in an individual [11]. Resilience is crucial for coping with challenges and negative events, as it reflects internal and interpersonal resources that facilitate effective adaptation. Resilient individuals often employ active coping mechanisms, benefit from social support and understand when to seek help [41]. Research has shown that Factors such as stigma, lack of support, and adverse economic conditions can increase stress among PLHIV, leading to isolation as a coping mechanism [42]. A robust support network can reduce stress and psychosocial issues, providing a sense of social empowerment [43].

Our results may be similar to or different from previous research due to differences in study design, setting, sampling method, data collection tools, and population characteristics. However, the results highlight practical implications for improving the health outcomes of PLHIV through interventions, policy changes, and future research. Healthcare providers should develop integrated psychological and social care services in behavioral disease counseling center to promote positive health outcomes for PLHIV. Additionally, PLHIV should be encouraged to engage with the community by increasing access to healthcare services that enhance resilience and prevent social isolation.

Limitations

This study has several limitations, including its cross-sectional design and potential biases such as self-report bias, confounding cultural factors, small sample size, and convenience sampling, which may impact the generalizability of the results. Since no specific tool was found to assess the resilience and social isolation among PLHIV, longitudinal studies with stronger designs are recommended to address these limitations, considering cultural differences and using specialized, valid, and reliable tools to assess resilience and social isolation of PLHIV in Iran.

Conclusions

The results revealed that PLHIV experienced high resilience but moderate social isolation, and there was a strong inverse correlation between resilience and social isolation. Resilience training can help PLHIV reduce social isolation and prevent psychosocial harm. Policymakers, social workers, healthcare providers should prioritize resilience training to decrease social isolation among PLHIV and their families. Healthcare providers should encourage PLHIV to engage in self-care programs to promote physical and mental well-being and enhance their ability to cope with challenges. Future research should investigate the effectiveness of these interventions for PLHIV.

Abbreviations

RIM	Resilience in Illness Model
PLHIV	People living with HIV
CD-RISC	The Connor-Davidson Resilience Scale
UCLA	Loneliness Scale, University of California at Los Angeles Loneliness Scale

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Author contributions

ML, AS, NT, and JF contributed to conceiving and designing the research. The data were collected, analyzed, and interpreted by ML, AS, and JF. ML, AS, NT, and JF contributed equally to writing and revising the manuscript and approved the final manuscript.

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Data availability

The data supporting the findings of this study are available from the corresponding author on reasonable request.

Declarations

Ethics approval and consent to participate

This paper, with a project code of 401000750, received approval from the Ethics Committee of Kerman University of Medical Sciences (IR.KMU.REC.1402.015). The study was carried out in accordance with the Declaration of Helsinki and the Committee on Publication Ethics (COPE). The first author gathered the data after receiving written informed consent from the eligible people living with HIV, explaining the method and confidentiality and anonymity of their information. Their participation was voluntary, and they could discontinue the study at any time without any negative consequences.

Consent for publication

Not applicable.

Competing interests

The authors declare no competing interests.

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