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Original Article

Perceived Social Support as a Predictor of General Health in HIV+ Patients: Moderating Role of Gender

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ABSTRACT

Human Immunodeficiency Virus (HIV) affects the functioning of the human immune system (HIS). **Objectives:** To evaluate the predictive role of social support in general health among HIV+ patients, and the moderating role of gender between social support and general health. **Methods:** Cross-sectional study was carried out at the Jinnah Hospital Lahore, Pakistan Institute of Medical Sciences (PIMS), Association of people living with HIV and AIDS Islamabad, and New Light AIDS control program (NGO) Rawalpindi from February 2019 to March 2020. Berlin Social Support Scale and General Health Questionnaire were used to assess perceived social support and general health among HIV patients. **Results:** Social support significantly predicted general health components ($p < .001$), and significant moderating effect of gender ($\beta = -.32$, $t = 2.49$, $p<.05$) was found between social support and general health among HIV patients. **Conclusions:** Social support emerged as a protective factor of general health in HIV+ patients in Pakistan that helped them to manage stress and fight with their illness. The high level of social support system tends to decrease general health problems among HIV + patients; however relationship between perceived social support and general health was stronger among women as compared to men.

INTRODUCTION

Human Immunodeficiency Virus (HIV) affects the functioning of the human immune system (HIS). The progressive weakening of the HIS by HIV infection can lead to the more life-threatening conditions of Acquired Immune Deficiency Syndrome (AIDS) [1]. Since 1981, when the first reported case of AIDS emerged, to date, around 1.7 million people have suffered from this infectious virus of HIV. According, to an estimated report around 36.7 million people, all over the globe are infected with HIV+, and an additional 2.1 million new cases were reported in the year of 2015 [2]. The number of HIV patients is increasing dramatically in Pakistan. According to UNAIDS, roughly 98,000 HIV cases were reported in Pakistan in the year 2009 with a prevalence rate surpassing 0.05 percent [3]. The latest UNAIDS Pakistan Global AIDS Monitoring report (2020), Pakistan has an estimated 183,705 people living with HIV (PLHIV). Statistics on the HIV prevalence in Pakistan are indicating the gravity of the medical issue. Pakistan is included in 10 top countries comprising more than 95% newly diagnosed cases of HIV. Akin considering the lethal effects of HIV spreading in Pakistani society, developing knowledge related to HIV risk behavior is important to minimize the negative effect of HIV among the general population of Pakistan [4]. HIV is a life-threatening condition, if left untreated for several years can develop into AIDS [5]. In the time of this strenuous life adversity for ill-being, a strong support system provided by family and peers can act as a buffer against serious chronic ailments

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and helps to ensure vigorous wellbeing and general health. Israr and Ahmad defined social support as constitutes of caring, appreciative, and significant feelings which are shown by loved ones like; family members, peers, academic figures which are considered as role models, and a society [6]. General health (GH) refers to health system strategies that comprise of social activities and approaches based on preventive measures [7]. It is well understood that HIV can harm GH of HIV+ diagnosed patients by inducing negative schema in the patient's mind. Several empirical shreds of evidence in the field of health psychology have highlighted that HIV infection critically impairs the mental wellbeing of HIV patients [8]. Empirical studies have reported high prevalence of mental health problems like depression, anxiety, drug addiction, and suicide attempts among HIV+ patients [9, 10]. Empirical studies have indicated that female HIV+ patients report more mental health and sexual health problems than their male counterparts [11, 12]. Social support plays significant positive role in improving mental health among HIV+ patients via improved self-esteem, and perceived quality of life. Stress-buffering hypothesis identifies the moderating impact of social support between HIV-related distress and mental health problems such as anxiety and depressive indicators [13]. Studies have shown that social support of friends in HIV+ female patients decreased the risky sexual behaviors, while for male patients, social support by family helped to reduce the HIV risky behaviors [14]. Considering the literature gap, and the critical social health crisis of HIV+ patients in Pakistan, it is important to examine the impact of social support on the general health of HIV+ patients, moderated by gender. To the best of our knowledge, the present study was the first in its attempt to investigate the moderating effect of gender between social support and general health among diagnosed HIV+ patients in Pakistan.

METHODS

The cross-sectional study was carried out at the Jinnah Hospital Lahore, Pakistan Institute of Medical Sciences (PIMS), Association of people living with HIV and AIDs Islamabad, and New Light AIDs control program (NGO) Rawalpindi from February 2019 to March 2020, comprising diagnosed and registered HIV+ patients. For ethical considerations, the approval to execute the study was taken from the ASRB of the University. Before data collection, formal permission was also taken from the official authorities of the Punjab AIDS Control Program (PACP), and the National AIDS Control Program (NACP). The sample size was calculated using the Raosoft website's calculator, keeping 50.0% response division, 0.5% margin-error, and 95% confidence interval (CI) [15]. Purposive sampling technique protocols were followed in data collection. The sample age ranged between 18-67 years with a mean 36.4 ± 10.3. Patients of AIDS were excluded from the study as their health condition was not allowing them to take part in the study. After receiving consent from the patients, data were collected via demographic datasheet, Urdu version of the Berlin Social Support Scale (BSS-S) [16], Urdu version of General Health Questionnaire (GHQ- 28) [17]. Higher score on GHQ indicates lower general health. Data were analyzed using SPSS-version 23.

RESULTS

Variables		Frequency (%)
Gender	Men	291 (80.6 %)
	Women	70 (19.4 %)
Marital Status	Married	233 (64.5 %)
	Unmarried	89 (24.7 %)
	Divorced	12 (3.3 %)
	Widow	27 (7.5 %)
Age category	18-25 years	51 (14.1 %)
	26-35 years	152 (42.1 %)
	36-45 years	84 (23.3 %)
	46-54 years	54 (15.0 %)
	55 years and above	20 (5.5 %)

Table 1: Demographic frequency of HIV patients (N=361)

In Table 2, most of the subscales of social support and general health show significant negative correlations that indicates that higher social
support leads to better general health of HIV + patients.

Variables	1	2	3	4	5	6	7	8	Mean ± SD
1.IS	-	.77**	.55	.58**	-.34**	-.50**	-.00	-.18**	27.76±5.10
2.NS		-	.57**	.61**	-.34**	-.02	.01	-.25**	10.04±2.17
3.SSK			-	.55**	-.38**	-.05	-.10*	-.22**	16.45±3.32
4.AR				-	-.38**	-.05	-.13**	-.27**	45.65±9.07
5.SOM					-	.31**	.32**	.42**	14.4± 5.20
6.ANX						-	.51**	.19**	12.9±5.51
7.DEP							-	.23**	14.1±4.54
8.SDYS								-	10.6±5.11

Table 2: Correlations among Study Variables (N=361)

**p< .01, IS=Interpersonal Support; NS=Need of Support; SSK=Support Seeking; AR=Actually Received; SOM= Somatic; ANX= Anxiety; DEP= Depression; SDYS= Social Dysfunctioning

Linear regression analysis indicates that SS negatively predicted SOM (β= -.24, p <.001), and brought about 6% change in SOM{R2= .06, F (1, 359), p<.001}, ANX(β= -.29, p <.001), and showed 8% change in ANX{R2= .08, F (1, 359), p<.001}, and SDYS (β= -.31, p <.001) and explained 9% change in SDYS {R2= .09, F (1, 359), p<.001}. SS also predicted DEP (β= -.37, p <.001), and showed total of 12 % variance in DEP {R2= .12, F (1, 359), p<.001} (Table 3).

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Predictors	B	SE B	B	R^2
SOM				
SS	-.08	.02	-.24***	.24
ANX				
SS	-.10	.01	-.29***	.08
SDYS				
SS	-.09	.01	-.31***	.09
DEP				
SS	-.20	.01	-.34***	.12

Table 3: Social Support as a Predictor of General Health (N=361)

Note. SS=Social Support; SOM= Somatic; ANX= Anxiety; SDYS= Social Dysfunctioning; DEP= Depression. ***p<.001.

The moderation analysis was carried out in three steps. In first step SS model significantly {ΔR^2= .11, F (1, 359), p >.001}, predicted GH (β = .34, p>.001). In the 2nd step, gender was entered, which appeared as a non-significant predictor of GH (β = -.01, p =.91) and explained 1 % change in the GH {ΔR^2= .12, F (2, 358), p < .001}. In 3rd step moderation model was tested by combining the effects of SS × G moderation effect was significant R2= .13, F (3, 357) = 18.73, p < .001} and combine product of SS and G significantly predicted GH in total (β= -.32, t = 2.49, p<.05). The moderating model brought about a 1 % additional change in GH. The table showed significant moderating effect of gender when combined with social support (Table 4).

(Y)GH				
Predictors	ΔR^2	B	SE	B
Step 1	.11			
(X)SS		-5.97	.85	-.34***
Step II	.12			
(X)SS		-5.98	.85	-.34***
(M)G		-.23	1.98	-.01
Step III	.13			
(X)SS		-.79	2.24	-.04
(M)G		-1.12	1.99	.-.02
(X)SS × (M)G		-4.07	1.63	-.32*
Total R2	.14			

Table 4: Summary of Predicting General Health (GH) from Social Support (SS), Moderated by Gender (G)

Note. SS=Social Support; GH= General Health; G=Gender. X = Predictor; M = Mediator; Y = Outcome. ***p < .001, *p < .05.

The figure 1 shows that female patients perceive more social support that helps them to enhance their general health as compared to male patients.

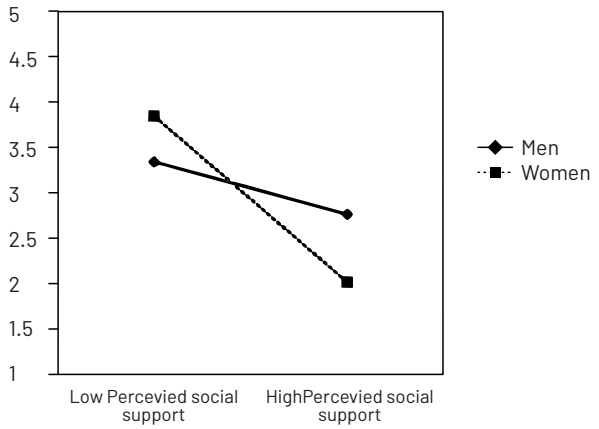

Figure 1: Relationship between perceived social support and general health moderated by gender.

DISCUSSION

The current study was carried out to investigate predictive strength of social support in general health, moderated by gender in diagnosed HIV+ patients in Pakistan. Pearson moment correlations have shown negative relationships between social support and different dimensions of general health among HIV patients, and a significant amount of variance in general health was accounted for by social support (Table 2 and 3), showing that higher social support decreases the general health issues of these patients like; anxiety, depression, and social problems. Social support by family, friends, and closer ones act as a buffer against life stresses and reduced the severity of emotional and physical problems as it gives us the strength to recover from life trauma in a shorter period [18]. Results are consistent with the empirical evidences shown the positive impact of social support in improving quality of life, mental health needs, self-respect, life satisfaction, and health-related quality of life of HIV+ patients. The negative effects of HIV illness are diverse as it leads to stigma, self-isolation, and loneliness [19]. A significant moderating effect of gender was found between the relationship of social support and general health. Moderation analysis revealed that relationship between social support and general health was stronger among female patients as compared to the male patients. Social support by loved ones helps the female patients to better cope with HIV illness and enables them to deal with emotional traumas effectively related to their general health. These findings are in line with previous studies which indicated that women perceiving more social support were lesser inclined to stress [19, 20]. One possible explanation for this finding is that gender wise, women turn more towards family support and more social interactions in traumatic life situations as compared to men. As supported by other studies, availability of social support enhanced the psychological well-being of women as compared to men.

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When women receive lesser social support, they become more prone to develop depressive symptomology, so this denotes that women tend to benefit more from social support as compared to men. Men are less likely to spot their mental health needs and they rarely seek mental health treatment and amenities [21]. In Pakistan's cultural context, masculine gender roles are emphasized that weakens men's attitude towards basic mental health needs and hinder help-seeking behaviors and social support by loved ones [22, 23]. Keeping the above discussion in mind there is a dire need to address the psychosocial needs of HIV+ patients. In addition to psychotherapies, these patients need social support from their families, friends and co-workers that definitely mitigates the negative impact of illness on their health in general. Clinical and health professionals should also consider the gender-based mental health needs and decision processes, while developing interventions for HIV patients of both genders in the indigenous culture. Clinicians and counselors may consider focusing on finding ways in which family and friends could offer support in order to effectively buffer the negative impact of HIV on all human functioning. The results of the current study should be cited with caution due to certain limitations. Data were collected from one province of Pakistan (i.e., Punjab), which does not represent the whole country, so in future data should be collected from other provinces of Pakistan for better representation and generalizability of the results. Due to self-report measures, we should keep in mind the risk of common method variance. Cross-sectional data were utilized, so we cannot establish causation in the study variables, so the future researchers are encouraged to carry out longitudinal studies.

CONCLUSIONS

Present study has validated the role of social support in determining the general health of HIV positive patients. Current research findings have shown that the general health of HIV is significantly affected by the love and support they receive from their families. The high level of social support tends to decrease general health issues among chronic HIV + patients. For that, there is a dire need to develop awareness among the family of HIV patients, about the significance of social support. Stronger negative relationship between perceived social support and general health among women as compared to men reveals that women are more prone to seek social support as compared to men. It indicates that men should also find ways for creating social networks and interacting with other people in a more affirmative and effective manner, so that they can better manage their illness and reduce illness related stress.

Conflicts of Interest

The authors declare no conflict of interest.

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