

## ASSESSMENT OF PERCEIVED SOCIAL SUPPORT AND ITS RELATIONSHIP WITH HEALTH-RELATED QUALITY OF LIFE IN HIV/AIDS PATIENTS VISITING A TEACHING HOSPITAL IN PAKISTAN

Hammad Jamshed<sup>1</sup>, Meena Gyawali<sup>1</sup>, Muhammad Ali<sup>2</sup>, Mehwish Akhtar<sup>2</sup>

<sup>1</sup>Jalalabad State Medical University named after B.Osmonov, Kyrgyzstan

<sup>2</sup>Allama Iqbal Medical College, Lahore, Pakistan

### Abstract

HIV/AIDS is one of the most devastating diseases humanities has ever faced. AIDS patients not only require effective treatment for physical discomfort but also require social support to help them address difficulties in life and relieve their psychological anxiety and uneasiness. This study aims to analyze the status of perceived social support and health quality among AIDS patients in medical institutes of Lahore, Pakistan.

It was cross sectional study, in which 101 patients of age  $\geq 18$  years, presenting with AIDS to Jinnah Hospital, confirmed on serology and fulfilling the selection criteria, were enrolled, using informed consent, through non probability convenience sampling. A questionnaire comprising all study variables was designed to collect data. The collected data was analyzed using SPSS version 24 and  $p < 0.05$  was considered statistically significant.

The total number of participants included in our study were 101 in which 77(76.2%) were males and 24(23.8) were females. The most frequent age group was found to be 30 to 39 years with 48(47.5%) participants. 47(46.5%) participants belonged to rural areas while 54(53.5%) belonged to urban areas. The mean scores calculated for social support and physical and mental components of SF12v2 were MSPSS=53.84+15.47, PCS=40.41+10.52 and MCS=40.30+10.01, respectively. Both the MCS and PCS show a positive correlation with perceived social support. Perceived social support was more strongly positively related to physical health (PCS),  $r = .271$ ,  $p < .01$  than to mental health (MCS),  $r = .159$ ,  $p < .01$ .

This study revealed that the social support level among people living with HIV/AIDS was generally low. It was found that there is a positive association between perceived social support, and physical and mental aspects of health of PLWHA. It was also identified that perceived social support was more strongly related to physical health of PLWHA than mental health. These findings suggest the need for better social support system for PLWHA.

**Key words:** perceived social support, health quality, cross sectional study, MSPSS

## ОЦЕНКА ВОСПРИНИМАЕМОЙ СОЦИАЛЬНОЙ ПОДДЕРЖКИ И ЕЕ СВЯЗИ С КАЧЕСТВОМ ЖИЗНИ, СВЯЗАННЫМ СО ЗДОРОВЬЕМ, У ПАЦИЕНТОВ С ВИЧ/СПИДОМ, ПОСЕЩАЮЩИХ УЧЕБНУЮ БОЛЬНИЦУ В ПАКИСТАНЕ

Хаммад Джамшед<sup>1</sup>, Мина Гьявали<sup>1</sup>, Мухаммед Али<sup>2</sup>, Мехвиш Ахтар<sup>2</sup>

<sup>1</sup>Джалал-Абадский государственный медицинский университет имени Б. Осмонова, Кыргызстан

<sup>2</sup>Медицинский колледж Аллама Икбала, Лахор, Пакистан

### Аннотация

ВИЧ/СПИД — одно из самых разрушительных заболеваний, с которыми когда-либо сталкивалось человечество. Больным СПИДом требуется не только эффективное лечение физического дискомфорта, но и социальная поддержка, которая поможет им

справиться с трудностями в жизни и снять психологическую тревогу и беспокойство. Целью данного исследования является анализ статуса воспринимаемой социальной поддержки и качества здоровья среди больных СПИДом в медицинских институтах Лахора, Пакистан.

Это было поперечное исследование, в котором 101 пациент в возрасте  $\geq 18$  лет, поступивший со СПИДом в больницу Джинна, подтвержденный серологически и отвечающий критериям отбора, был включен с использованием информированного согласия посредством невероятностной удобной выборки. Для сбора данных была разработана анкета, включающая все переменные исследования. Собранные данные были проанализированы с помощью SPSS версии 24, и  $p < 0,05$  считалось статистически значимым.

Общее количество участников, включенных в наше исследование, составило 101, из которых 77 (76,2%) были мужчинами и 24 (23,8) были женщинами. Наиболее частой возрастной группой оказались 30–39 лет с 48 (47,5%) участниками. 47 (46,5%) участников были из сельской местности, а 54 (53,5%) — из городской. Средние баллы, рассчитанные для социальной поддержки и физических и психических компонентов SF12v2, составили  $MSPSS=53,84+15,47$ ,  $PCS=40,41+10,52$  и  $MCS=40,30+10,01$  соответственно. Как MCS, так и PCS показывают положительную корреляцию с воспринимаемой социальной поддержкой. Воспринимаемая социальная поддержка была сильнее положительно связана с физическим здоровьем (PCS),  $r=.271$ ,  $p<.01$ , чем с психическим здоровьем (MCS),  $r=.159$ ,  $p<.01$ . Это исследование показало, что уровень социальной поддержки среди людей, живущих с ВИЧ/СПИДом, в целом был низким. Было обнаружено, что существует положительная связь между воспринимаемой социальной поддержкой и физическими и психическими аспектами здоровья ЛЖВС. Также было выявлено, что воспринимаемая социальная поддержка была сильнее связана с физическим здоровьем ЛЖВС, чем с психическим здоровьем. Эти результаты указывают на необходимость лучшей системы социальной поддержки для ЛЖВС.

**Ключевые слова:** воспринимаемая социальная поддержка, качество здоровья, поперечное исследование, MSP

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Correspondence: Hammad Jamshed, Medical Student, Jalal-Abad State University named after B.Osmonov, Jalal-Abad, Kyrgyzstan, Email: hammadjamshaid89@gmail.com

## Introduction

AIDS is a major global public health issue [1]. Approximately one century ago in South-Eastern Cameroon, cross-species transmission of Simian Immunodeficiency virus (SIV) in chimpanzees gave rise to HIV-1 group M(main), the principal cause of AIDS pandemic in humans [2]. Social support enables AIDS patients to better cope with stress associated to the disease [3]. The quality and quantity of individuals' social relationships has been linked not only to mental health but also to both morbidity and mortality [4]. In recent years, social support to marginalized populations within AIDS epidemic has been served, highlighting specific needs of LGBTQ+ and transgender communities [5].

Acquired Immunodeficiency Syndrome (AIDS) of humans is caused by two lentiviruses, human immunodeficiency viruses, types 1 and 2 (HIV-1 and HIV-2) [6]. Numerous studies

indicate that people with spouses, friends and family members who provide psychological and material resources are in better health than those with fewer supportive social contacts [7].

In Pakistan, as of June 2019, 24,331 AIDS patients were registered with National Aids control program (NACP) but estimated number of people living with infection is estimated to be 165,000. Prevalence percentage in Pakistan is estimated to be less than 0.1% with incidence rate of 3.1 per 1000 [8]. The percentages of vulnerable population to HIV in Pakistan are concentrated as; People with injected drugs=38.4%, Transgender sex workers=7.5%, trans people=7.1%, Male Sex workers=5.6%, homosexual men=5.4%, Female Sex workers=2.2% [8]. Till June 2023, NACP has registered 60,439 HIV cases. HIV has affected over 75 million people globally [8].

According to a study conducted in South Eastern United States in 2013, depressive symptoms among PLWHA (People living with HIV/AIDS) were 56.7% which negatively impact health outcomes [9]. Another research is on perceived stigma, social support and QOL (Quality of Life) set in May 2015 in Hunan China, the scores reflecting findings were perceived stigma (104.31), Social support (53.63), and QOL (61.97) [10].

The first case in Pakistan was documented in 1988 of HIV in 4 members of a family in Karachi, via a drug abuser husband who transmitted it to his wife (heterosexually) and subsequently, his children [11]. In a study, it was found that only 42% of Pakistani women have heard about HIV/AIDS among who the majority (68%) have good overall knowledge of HIV/AIDS and more than 55% have positive attitudes towards people living with AIDS [12]. Between April 24, and July 15, 2019, around 31, 239 individuals underwent HIV testing, of whom 930 (3%) tested positive for HIV. Of these, 763 (82%) were younger than 16 years and 604 (79%) of these were aged 5 years and below. Estimated HIV prevalence was 3% overall [13].

Previous researches on social support for AIDS patients has shown significant progress in understanding the importance of emotional, psychological, and practical assistance in managing the challenges of the disease. However, these studies have often lacked a comprehensive exploration of the nuanced cultural, socioeconomic, and gender-specific dimensions that can deeply influence the nature and effectiveness of social support. Additionally, many earlier investigations focused primarily on the immediate circle of family and friends, neglecting the broader community networks and online platforms that now play a pivotal role in shaping the support landscape. Addressing these limitations would lead to a more holistic understanding of how social support systems can be optimally tailored to the diverse needs of AIDS patients, promoting their well-being and enhancing their quality of life.

## Methods

It was a cross-sectional study which was conducted at AIDS clinic (room no.34) of Jinnah Hospital, Lahore which took place over a period of 2 months after approval. The study population was comprised of individuals who were present at AIDS clinic of Jinnah Hospital Lahore during the specified period. These individuals were AIDS patients seeking medical treatment. Convenient sampling technique was used to select participants as they present themselves to the hospital. Sample size was calculated through single population proportion based on the following assumption; the proportion of low perceived social support (p) of 50%, with a 95% level of confidence and 5% margins of error considering non-response rate 10%, the final sample size became 423. [20] Quantitative data was collected using a structured questionnaire that includes validated scales to assess perceived social support and health quality. The questionnaire was pretested before data collection to ensure clarity and validity.

Participants were approached in the AIDS clinic of Jinnah Hospital during their visit for medical care. After obtaining consent, participants were given a brief overview of the study's objectives, the nature of the questions to be asked, and the anticipated time required for participation. Quantitative data were entered into a software tool (e.g., SPSS) to facilitate analysis.

Ethical issues were addressed by obtaining informed consent from participants before data collection. Confidentiality was maintained by using participant codes instead of names, and all data will be stored securely. Permission to conduct the study was obtained from relevant authorities. The participants have a right to withdraw from the study.

Data were analyzed using descriptive statistics (mean, median, standard deviation) and inferential statistics (correlation, regression). Relationships between variables was calculated using appropriate statistical tests (e.g., Pearson correlation).

## Results

The total number of participants included in our study were 101 in which 77 (76.2%) were males and 24 (23.8%) were females, as shown in Table 1. Four age groups were made and the most frequent age group was 30 to 39 years with 48 (47.5%) participants in it. The marital status of participants was found to be married for a majority of 63 participants (62.4%). Also, 47 (46.5%) participants belonged to rural areas while 54 (53.5%) belonged to urban areas.

The social support of the sample was assessed by using The Multidimensional Scale of Perceived Social Support (MSPSS) and Health Quality of Life was assessed by using SF12v2 consisting of PCS (Physical Component Summary) and MCS (Mental Component Summary) sub classes. The calculation of mean scores along with standard deviations gave MSPSS=53.84 +15.47, PCS=40.41+10.52 and MCS=40.30 +10.01, as presented in Table 5 below.

A Pearson product-moment correlation was conducted to examine the relationships between perceived social support, physical and mental health of AIDS patients. Both the MCS and PCS show a positive correlation with perceived social support. Perceived social support was more strongly positively related to physical health(PCS),  $r = .271$ ,  $p < .01$  than to mental health(MCS),  $r = .159$ ,  $p < .01$ .

A complete list of correlations is presented in Table 6.

• *Table 1: Frequency Distribution of the Gender (n=101)*

Gender	Frequency	Percent
Male	77	76.2
Female	24	23.8
Total	101	100.0

• *Table 2: Frequency Distribution of Age Groups (n=101)*

Age Groups	Frequency	Percent
18 to 29	29	28.7
30 to 39	48	47.5
40 to 49	17	16.8
50 to 59	6	5.9
60 to high	1	1.0
Total	101	100.0

• *Table 3: Frequency Distribution of Marital Status (n=101)*

Marital Status	Frequency	Percent
Married	63	62.4
Unmarried	36	35.6
Widow	2	2.0
Total	101	100.0

• *Table 4: Frequency Distribution of Residential Area (n=101)*

Residential Area	Frequency	Percent
Rural	47	46.5
Urban	54	53.5
Total	101	100.0

• *Table 5: Relationship of total MSPSS score with PCS score and MCS score*

	Total MSPSS	PCS score	MCS score
Mean	53.8416	40.4122	40.3088
Std. Deviation	15.47497	10.52500	10.01747
Range	85.00	47.74	47.06
Minimum	20.00	16.96	16.04
Maximum	105.00	64.71	63.10

• *Table 6: Pearson correlation of PCS score and MCS score with MSPSS score*

	Pearson Correlation	Sig. (2-tailed)
PCS score with MSPSS	0.271	0.006
MCS score with MSPSS	0.159	0.111

## Discussion

A total of 101 participants (PLWHA) were studied to assess perceived social support and health related quality of life (HRQOL). Our findings suggest that there is a positive Pearson correlation between perceived social support and the health (both physical and mental domains) of PLWHA. However, Physical health (PCS) is more strongly associated with perceive social support than mental health (MCS).

Our study results highlight the importance of enhancing social support to enhance mental and physical health outcomes in vulnerable population of PLWHA. Less social support due to stigma, low social economic status and many other causes, affects health related quality of life (HRQOL) badly [4]. These results are consistent with prior literature. Social support to vulnerable population (PLWHA) plays important role in preventing complication of AIDS. We found that PLWHA are receiving lower level of perceived social support than ideal one. This badly affects health care team efforts to combat the disease. Having a significant other, healthy family relations and helping friends increase will power of patients to fight against hardships, thus increasing health output in PLWHA[15]. Our study covers both genders using same questionnaire. Recent relevant studies only focused on male population of relevant area due to majority of male patients in the area and lesser stigma to research work in male patients. We used universal measure of health related quality of life (HRQOL) rather than an HIV-specific measure that includes illness symptomatically. Moreover, sample size was less



in our study. Also, prospective studies are needed to identify further correlations separately among female patients affected with AIDS.

Interestingly, our study suggests that perceived social support is more strongly positively related to Physical health(PCS), ( $r=0.271$ ), than to mental health(MCS), ( $r=0.159$ ). This result is a renovation to the concept of strong association of social support and mental health. This result drills attention to the importance of social support input for health output.

According to our study, the mean score for MSPSS is  $53.84 \pm 15.47$ , for PCS is  $40.41 \pm 10.52$  and for MCS is  $40.30 \pm 10.01$  i.e. both MCS and PCS show positive correlation with perceived social support. It suggests that having an active social support network for PLWHA can contribute to positive physical and mental health outcomes.

Perceived social support was more strongly positively related to physical health(PCS),  $r=0.271$ ,  $p<.01$  than to mental health(MCS),  $r=0.159$ ,  $p<.01$ . It implies that the physical health status of PLWHA is more affected by the level of perceived social support as compared to mental health status, which is a quite distinct observation in comparison to similar researches.

In relation to perceived social support, the mean score of family support network was more than the mean score of non-family support network i.e. the main sources of social support were spouse and family members. There was relatively less involvement and social support for PLWHA from their friends which might be due to stigmas associated with HIV/AIDS.

The current research could be better conducted by having relatively larger sample size and population diversity to ensure accuracy of results. Future studies can be guided by applying theoretical frameworks and technical innovations. Future researchers can broaden the prospects by exploring various factors associated with social support in PLWHA and how this association might be affected during different stages of disease and by socio-cultural characteristics of population under study. Furthermore, there's need for evaluation studies to carry out preventive interventions for population at risk of PLWHA (people living with HIV/AIDS).

## Conclusion

This study revealed that the social support level among people living with HIV/AIDS was generally low. It was found that there is positive association between perceived social support and physical and mental aspects of health of PLWHA. It was also identified that perceived social support was more strongly related to physical health of PLWHA than mental health. These findings suggest the need for better social support system for PLWHA.

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