

# IMPACT OF STIGMA, DISCRIMINATION AND SOCIAL SUPPORT ON PSYCHOLOGICAL DISTRESS AMONG AIDS PATIENTS: ROLE OF COGNITIVE BEHAVIOR THERAPY

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## Abstract

**Objectives:** The HIV (Human Immunodeficiency Virus) is an innovative germ that produced infection of HIV and AIDS. AIDS is a situation in individuals in which immune system is fail to carry its work and increase the infections of cancer and life threatening poisons. The main objective of this study was to determine the relationship of stigma, discrimination and social support with psychological distress as symptoms of anxiety, depression, stress and level of stigma among HIV/AIDS patients. Further, the second purpose of the study was to treatment of the AIDS patient's emotional distress through cognitive behavior therapy. **Design/Methods:** Sample of 150 registered patients of AIDS selected through purposive sampling technique from different Hospitals in district Gujrat, Punjab Pakistan. The age range of the participants were 18-70 years with mean age (36.43). Four scales as "HIV Stigma Scale, Discrimination Scale (subscale of HIV Stigma Scale), Social support Scale and Psychological Distress Scale" were used in the study. After scrutiny twenty (20) patients with high level of psychological distress was registered for intervention. Pearson Correlation, two step cluster and t-test analysis were used. **Results:** Results of study showed that stigma has positive relationship with psychological distress, anxiety, depression and stress ( $r = .405, p < .01, r = .307, p < .01, r = .467, p < .01, r = .332, p < .01$ , respectively). Cluster analysis of stigma showed that 33 patients were in low level of stigma, 55 in medium and 62 in high level stigma Discrimination has positive relationship with psychological distress, anxiety, depression and stress ( $r = .456, p < .01, r = .378, p < .01, r = .434, p < .01, r = .424, p < .01$  respectively). Social-support has negative relationship with psychological distress, anxiety, depression and stress ( $r = -.283, p < .01, r = -.189, p < .05, r = -.307, p < .01, r = -.275, p < .01$  respectively). Results also indicated that Cognitive Behavior Therapy has great effective on Psychological distress as there is significant difference in mean scores of psychological distress of AIDS patients ( $M = 109.5, M = 94.00$ ). **Conclusion:** The study shows that stigma and discrimination has a significant relationship with psychological distress (anxiety, depression and stress) and most of the patients lie in high level of stigma. Results also showed that social support has inverse relation with psychological distress as symptoms of anxiety, depression and stress. Psychological distress among AIDS patients can be overcome through the intervention as cognitive behavior therapy.

**Keywords:** AIDS, Psychological Distress, Stigma, Discrimination, Social Support, Cognitive Behavior Therapy.

## INTRODUCTION

In the world health it becomes one of the highest task (Azizi, Saboory & Ghaderi, 2014) [1]. Throughout the world, HIV/AIDS permanently has been most inclusive disease. HIV is stands for “Human Immunodeficiency Virus”. AIDS is stand for “Acquired Immuno Deficiency Syndrome”. In HIV ‘H’ only spread between humans and infect them. It is not transmitted through the animals, mosquitoes and any other kind of living things. ‘I’ is for immune system that is present in our body and protect us from the germs and infections. The immune structure of person with HIV is poor and has incapability to compete against diseases. ‘V’ is a minor, simplest virus that is inactive from the outside of the body and when this virus enters into the body it becomes active. In AIDS ‘A’ is not genetically transfer as by one generation to the next. It is diffused by infected person to healthy person. ‘I’ for weakness of immune system. ‘D’ cause the deficiency of cells in immune system. And ‘S’ is gathering of syndromes (Kapila & Chaudhary,2016) [9].

People living with HIV/AIDS also suffered stigma, discrimination which caused psychological distress among them. HIV related stigma negative feelings, attitudes, opinions and beliefs toward individuals with AIDS. These negative beliefs towards families of that people living with HIV/AIDS. Feelings of stigma are also present for those people whose are at risk of HIV infection i.e. person who used drugs injection, sex activities and transgender people (George, 2019) [8].

Another strong cause of distress in AIDS patients is a discrimination. HIV discrimination is defined as biased, unfair and unjust action to the individual with real or supposed HIV position. This discriminant behavior is generally based on negative features, attributes and views about people, behaviors, infection, sex and death. This judgmental actions can be established by the current law, rules and practices negatively give attention to the person with HIV (George, 2019) [8]. Discriminant behavior also linked with consequences of poor mental and physical health, also impact in the way to low social support and decrease income of person suffer with HIV infection. As an outcome, discrimination is continuously involved in negative impact of HIV and beginning of mental suffering (Edenshaw et al. 2014) [7].

Because of stigma and discrimination, social support for the AIDS patients also affected and they may be losing their jobs, economic resources and even lose the major source of support as family and friends. Social support is a phenomenon in which person has support which provided by his family, friends and other members of family during the time of need. This support can be in term of emotions, instruments and finance. Social support is related with healthier psychological regulation, emotive well-being and permanency, and inferior levels of illegal drug usage between HIV persons (Bekele et.al. 2013) [3].

HIV stigma, prejudice and denial by society leads to family and socially separation (Vander, Abrahams & Sinclair, 2017) [14]. In the community, a common mental health disease is Psychological Distress (PD). It can be defined as it is a state of emotional distress which contains symptoms of depression, anxiety, somatic complaints etc.

(Drapeau, Marchand & Beaulieu, 2012) [6]. People living with HIV/AIDS suffer different problems as shame, social rejection, economic insecurity, blame, depression, low self-esteem and other mentally and psychologically difficulties (Nyblade, Stockton & Giger, 2019) [12]. In the community, a common mental health disease is Psychological Distress (PD). It can be defined as it is a state of emotional distress which contains symptoms of depression, anxiety, somatic complaints etc. (Drapeau, Marchand & Beaulieu, 2012) [6].

Individuals with AIDS avoid to reveal their HIV status because of stigmatization and looking for support from their family, friends etc. Due to all of it, people also suffer with depressive symptoms (Tao et al. 2017) [13]. Cognitive therapy is constructed on the base of cognitive model, which describes how individual's views and thoughts impact their behavior, emotions and psychological reactions. Cognitive refers that how person can give and assign meanings to his thoughts. Automatic thoughts are stated as the unplanned, spontaneous interpretations linked with particular events in the present. Perceptions of individuals are often dysfunctional and distorted when they are in troubled. The goal of this therapy is that individual identify and learn about his automatic thoughts and correct his thoughts according to reality. It was also included that how people with psychological problems are feel and observe their events of life. If the perception of individual is accurate and positive, then accurate thinking of realities will present. But if inaccurate perception is present then depression, anxiety, hopelessness, anger and psychological distress will extant (Beck et.al. 1979) [2].

As people who suffer with AIDS also undergo with stress, anxiety, depression and different thoughts which are harmful for them. So, CBT is important for them to resolve the negative thoughts and behaviors. It can help the patients to overcome the thinking of shame, blaming and discriminant. Cognitive behavior therapy improves the management of symptoms of psychological problems of anxiety, stress, depression and psychological distress (Brunero, Cowan and Fairbrothe, 2008) [5].

## **METHODS**

The research participants were selected through purposive sampling technique. The respondents selected on the basis of informer's qualities required for study. Firstly, the investigator declared what are the requirements of research and then takes the information from the willing participants (Bernard, 2002) [4].

The study conducted at hospitals of Gujrat and Jalal Pur Jatan, Punjab Pakistan. The population of this research comprised of HIV/AIDS patients who are registered in hospitals of Gujrat and Jalal Pur Jatan. The simple random sampling technique was utilized for selecting the sample. The sample consist 18-70 years with mean age (36.43) of HIV patients. After taking permission from authorities the registered patients list was taken from hospital. After that some arrangements were made for the administration of instruments and treatment. Assessment instruments as "HIV Stigma Scale, Discrimination Scale (subscale of HIV Stigma Scale), Social support Scale and Psychological Distress Scale" were operated individually.

In order to explain the data Descriptive statistics Pearson Correlation and two step cluster were utilized on the Statistical Package for Social Sciences (SPSS –V. 25). Diagnosed AIDS patients who registered in AIDS center for treatment were included. For treatment patients with high level of psychological distress were included. Patients with below age of 18 years, having physical disability and diagnosed with other terminal and chronological disease were excluded. Those patients who did not understand the Urdu language were also excluded from the study.

### **Pre and Post Treatment**

20 patients with age range of 18 to 35 years with high level of psychological distress were selected for treatment. There were two groups in this phase of the study as Experimental group was involving of (n=10) patients, (n =5) males and (n= 5) females who received cognitive behavior therapy as intervention. Control group consist of (n=10) patients, (n= 6) males and (n =4) females who did not receive treatment. Then patients were given an agenda to visit for intervention. 10 sessions for each patient were design. Each session was consisting of 40-45 minutes per week.

### **Intervention**

Cognitive behavior therapy (CBT) technique applied with patients. In this therapeutic intervention, simple and step-by-step instructions were provided. In CBT, introduction, rapport building explanation about therapy sessions, updating about confidentiality of information delivered during sessions. During the sessions, worked on views and thoughts. Catharsis, progressive muscle relaxation, exercise, pleasant activities were used. Homework assignment for these sessions was mood thermometer, weekly activity schedule and working sheet for personal goals development. Further sessions were on relationships that also made consequence on moods. Patients were given a momentary talk about healthy relationships. Participants were informed about importance of social support by using a diagram and also clarified how to create and retain good and healthy relationships. Detailed work was done on expression of feeling and thoughts, also discussion about better communication skill with active listening exercise.

At this phase all the patients of both groups: experimental and control groups were reexamined with same instruments Psychological Distress Scale. For analysis paired sample T-test, was used to check the treatment's result.

### **RESULTS**

Statistical package for social sciences version 25 (SPSS-25) was used to administer result. Frequencies and percentages of demographic characteristics of participants were examined. Pearson correlation was run to find relationship between stigma, discrimination, social support and psychological distress. Paired sample test was used to determine the effect of intervention on participants.

**Table 5.1: Frequencies of Demographic Characteristics of the Sample (N=150)**

| Characteristics | Frequencies | Percentage |
|-----------------|-------------|------------|
|                 | F           | %          |
| <b>Gender</b>   |             |            |
| Female          | 67          | 44.7%      |
| Male            | 83          | 55.3%      |
| <b>Age</b>      |             |            |
| 18 years        | 7           | 4.7%       |
| 19 years        | 2           | 1.3%       |
| 20 years        | 5           | 3.3%       |
| 21 years        | 1           | 0.7%       |
| 22 years        | 2           | 1.3%       |
| 23 years        | 2           | 1.3%       |
| 24 years        | 3           | 2.0%       |
| 25 years        | 4           | 2.7%       |
| 26 years        | 2           | 1.3%       |
| 27 years        | 6           | 4.0%       |
| 28 years        | 5           | 3.3%       |
| 29 years        | 6           | 4.0%       |
| 30 years        | 9           | 6.0%       |
| 31 years        | 2           | 1.3%       |
| 32 years        | 6           | 4.0%       |
| 33 years        | 6           | 4.0%       |
| 34 years        | 4           | 2.7%       |
| 35 years        | 4           | 2.7%       |
| 36 years        | 3           | 2.0%       |
| 37 years        | 6           | 4.0%       |
| 38 years        | 5           | 3.3%       |
| 39 years        | 2           | 1.3%       |
| 40 years        | 12          | 8.0%       |
| 41 years        | 3           | 2.0%       |
| 42 years        | 5           | 3.3%       |
| 43 years        | 2           | 1.3%       |
| 44 years        | 1           | 0.7%       |
| 45 years        | 5           | 3.3%       |
| 46 years        | 3           | 2.0%       |
| 47 years        | 2           | 1.3%       |
| 49 years        | 3           | 2.0%       |
| 50 years        | 7           | 4.7%       |
| 51 years        | 1           | 0.7%       |
| 52 years        | 2           | 1.3%       |
| v55 years       | 2           | 1.3%       |
| 57 years        | 1           | 0.7%       |
| 58 years        | 1           | 0.7%       |
| 60 years        | 2           | 1.3%       |
| 62 years        | 2           | 1.3%       |
| 63 years        | 1           | 0.7%       |
| 69 years        | 1           | 0.7%       |
| 70 years        | 2           | 1.3%       |

Table 5.1 exposes Frequencies of Demographic Variable of Sample Such as Age and Gender.

**Table 5.2: Correlation of Stigma with Psychological Distress, Anxiety, Depression and Stress**

| Variables | SS     | PS     | AS     | DS     | STS    |
|-----------|--------|--------|--------|--------|--------|
| SS        | -      | .405** | .307** | .467** | .332** |
| PS        | .405** | -      | -      | -      | -      |
| AS        | .307** | -      | -      | -      | -      |
| DS        | .467** | -      | -      | -      | -      |
| STS       | .332*  | -      | -      | -      | -      |

*Note:* \*\*Correlation significant at  $p < 0.01$  (2-tailed). SS= Stigma Scale, PS= Psychological Distress Scale, AS= Anxiety Scale, DS= Depression Scale, STS= Stress Scale

Table 5.2 reveals the correlation of stigma with psychological distress, anxiety, depression and stress among patients with HIV/AIDS. Bivariate correlation analysis has been carried out on the data. Results showed significant positive relationship between stigma and psychological distress ( $r = .405, p < .01$ ). Stigma also described a positive significant relationship with anxiety ( $r = .307, p < .01$ ). Stigma also presented a positive significant relationship with depression ( $r = .467, p < .01$ ). Stigma also displayed a significant positive correlation with stress ( $r = .332, p < .01$ ).

**Table 5.3: Stigma Auto Clustering Table Showing Possible Number of Best Clusters (N = 150)**

| Numbers of Clusters | Schwarz's Bayesian Criterion (BIC) | BIC Change | Ratio of BIC Changes | Ratio of Distance Measure |
|---------------------|------------------------------------|------------|----------------------|---------------------------|
| 1                   | 113.493                            |            |                      |                           |
| 2                   | 64.547                             | -48.945    | 1.000                | 2.574                     |
| 3                   | 51.656                             | -12.891    | .263                 | 2.926                     |
| 4                   | 53.846                             | 2.190      | -.045                | 1.996                     |
| 5                   | 59.944                             | 6.098      | -.125                | 1.604                     |
| 6                   | 67.520                             | 7.576      | -.155                | 1.329                     |
| 7                   | 75.702                             | 8.182      | -.167                | 1.837                     |
| 8                   | 84.721                             | 9.020      | -.184                | 1.183                     |
| 9                   | 93.896                             | 9.175      | -.187                | 1.057                     |
| 10                  | 103.117                            | 9.221      | -.188                | 1.146                     |
| 11                  | 112.441                            | 9.323      | -.190                | 2.138                     |
| 12                  | 122.135                            | 9.695      | -.198                | 1.160                     |
| 13                  | 131.875                            | 9.740      | -.199                | 1.095                     |
| 14                  | 141.639                            | 9.764      | -.199                | 1.214                     |
| 15                  | 151.448                            | 9.809      | -.200                | 1.036                     |

Table 5.3 displays that classification collections are appropriate in data by computing clustering standard for every probable number of clusters. Bayesian Information Criterion (BIC) values that are lesser determine well models and in this method, the "best" cluster result has the smallest BIC. The minimum value of BIC is 51.656 on Cluster 3 and -12.891 value of BIC alteration. This value is from cluster 3, which shows that three clusters signify

best classification of data. So, the deviances in BIC and variations in the distance measure has assessed to identify the best cluster solution. A best explanation will have a realistically big Ratio of BIC variations 1.000 and a high Ratio of Distance Measures 2.92. Here, the value of great Ratio of BIC Variations lies in the cluster 2 and the large Ratio of Distance Measures lies in the cluster 3, hence, it is clear that we choose three clusters for this data.

**Table 5.4: Results of Cases Distribution in Each Cluster (N = 150)**

| Cluster  | N   | % of Combined | % of Total |
|----------|-----|---------------|------------|
| 1        | 33  | 22.0%         | 22.0%      |
| 2        | 55  | 36.7%         | 36.7%      |
| 3        | 62  | 41.3%         | 41.3%      |
| Combined | 150 | 100.0%        | 100.0%     |
| Total    | 150 |               | 100.0%     |

Table 5.4 shows the whole number of cases in each cluster. There are total 150 cases that are assigned into 3 clusters. There is a big change among frequency of cases in each cluster. 33 cases are allotted to the first cluster, 55 cases to the second, and 62 cases assigned to the third cluster. Findings show that most of cases fall in cluster three.

**Table 5.5: Showing Results of Centroids of Variables (N = 150)**

| Variables |    | Clusters |         |          | Combined |
|-----------|----|----------|---------|----------|----------|
|           |    | 1        | 2       | 3        |          |
| Stigma    | M  | 71.6061  | 93.8727 | 114.2419 | 97.3933  |
|           | SD | 7.84992  | 5.37158 | 7.78541  | 17.84606 |

Table 5.5 shows mean and standard deviation of each cluster's continuous variables. Findings show maximum mean values of all variables in cluster three as compared to other clusters. This shows high level of stigma in cluster three. Second highest mean values of all variables lie in cluster two which shows that there is moderate level of stigma in second cluster. Whereas, low mean values of each variable in cluster one depicts low level of stigma.

**Table 5.6: Results of Cluster Frequency and Percentages (N = 150)**

|         |          | Levels of Stigma |     |        |     |      |     |
|---------|----------|------------------|-----|--------|-----|------|-----|
|         |          | Low              |     | Medium |     | High |     |
|         |          | f                | %   | f      | %   | f    | %   |
| Cluster | 1        | 33               | 100 | 0      | 0   | 0    | 0   |
|         | 2        | 0                | 0   | 55     | 100 | 0    | 0   |
|         | 3        | 0                | 0   | 0      | 0   | 62   | 100 |
|         | Combined | 33               | 100 | 55     | 100 | 62   | 100 |

Table 5.6 shows the frequency and level of stigma in each cluster classification of AIDS patients. Frequency of cluster 1 express that 33 participants scored on low level of stigma and frequency of cluster 2 displays that 55 participants scored on moderate level of

stigma. Whereas cluster 3 shows high level of stigma where 62 scored on high level of stigma.

**Table 5.7: Correlation of Discrimination with Psychological Distress, (Anxiety, Depression, Stress)**

| Variables | DS     | PS     | AS     | DS     | STS    |
|-----------|--------|--------|--------|--------|--------|
| DS        | -      | .456** | .378** | .434** | .424** |
| PS        | .456** | -      | -      | -      | -      |
| AS        | .378** | -      | -      | -      | -      |
| DS        | .434** | -      | -      | -      | -      |
| STS       | .424*  | -      | -      | -      | -      |

*Note:* \*\*Correlation significant at  $p < 0.01$  (2-tailed). DS= Discrimination Scale, PS= Psychological Distress Scale, AS= Anxiety Scale, DS= Depression Scale, STS= Stress Scale

Table 5.7 showed the correlation of discrimination with psychological distress, anxiety, depression and stress among patients with HIV/AIDS. Bivariate correlation analysis has been carried out on the data. Results displayed significant positive relationship between discrimination and psychological distress ( $r = .456, p < .01$ ). Discrimination also described a positive significant relationship with anxiety ( $r = .378, p < .01$ ). Discrimination also presented a positive significant relationship with depression ( $r = .434, p < .01$ ). Discrimination also displayed a significant positive correlation with stress ( $r = .424, p < .01$ ).

**Table 5.8: Correlation of Social Support with Psychological Distress, Anxiety, Depression and Stress**

| Variables | SSS     | PS      | AS     | DS      | STS     |
|-----------|---------|---------|--------|---------|---------|
| SSS       | -       | -.283** | -.189* | -.307** | -.275** |
| PS        | -.283** | -       | -      | -       | -       |
| AS        | -.189*  | -       | -      | -       | -       |
| DS        | -.307** | -       | -      | -       | -       |
| STS       | -.275** | -       | -      | -       | -       |

*Note:* \*Correlation significant at  $p < 0.05$  (2-tailed). \*\*Correlation significant at  $p < 0.01$  (2-tailed). SSS= Social Support Scale, PS= Psychological Distress Scale, AS= Anxiety Scale, DS= Depression Scale, STS= Stress Scale

Table 5.8 indicated the correlation of social support with psychological distress, anxiety, depression and stress among patients with HIV/AIDS. Bivariate correlation analysis has been carried out on the data. Results displayed significant negative relationship between social support and psychological distress ( $r = -.283, p < .01$ ). Social Support also described a negative significant relationship with anxiety ( $r = -.189, p < .05$ ). Social Support also presented a negative significant relationship with depression ( $r = -.307, p < .01$ ). Social Support also displayed a significant negative correlation with stress ( $r = -.275, p < .01$ ).



**Table 5.9: Paired Sample T Test with Psychological Distress on Experimental and Control Group**

| Group  | Variables | Mean  | N  | S.D    | SE. mean | t-test | p-value |
|--|-----------|-------|----|--------|----------|--------|---------|
| <b>Experiential</b>  | Pre (PD)  | 109.5 | 10 | 10.309 | 3.26     | 10.23  | 0.000   |
|  | Pos (PD)  | 94.00 | 10 | 11.737 | 3.7118   |        |         |
| <b>Control</b>   | Pre (PD)  | 106.8 | 10 | 5.789  | 1.831    |        |         |
|  | Pos (PD)  | 106.9 | 10 | 5.789  | 1.831    |        |         |
| <i>Note: N= Number of Participants, S.D= Std. Deviation ,SE .Mean= Std. Error Mean</i> |           |       |    |        |          |        |         |

Table 5.9 indicate the impact of intervention on two groups as control and experiential. Results showed that there is change in mean score of experiential group (M= 109.5, M = 94.00). Results also indicate that control group that is without intervention has no changes in mean score.

## DISCUSSION

Current research indication showed that stigma of AIDS has a significant relationship with psychological distress such as anxiety, depression and stress. Further, Cluster analysis was also used to check the low, medium and high level of stigma among AIDS patients. Results indicate that most patients lie in the high level of stigma. The second hypothesis was also accepted that the result indicated that positive association of discrimination with psychological distress which means that if discriminant behavior of people increasing towards AIDS patients then their emotional state also affected.

Result indicated that social support has negative relationship with psychological distress and symptoms of anxiety, depression and stress. If people with HIV/AIDS have more social support, then they can overcome the mental problems. But due to low social and emotional support by their family, friends they can face more psychological issues.

To improve the emotion state of the AIDS patients, phase of the study cognitive behavior therapy was used for intervention in the second phase of the study. The result of the present study on the experiential group shows there is significant difference in mean scores of psychological distress of AIDS patients from pre and post test. The mean score for pre-test is M= 109.5, and mean score of post test is M= 94.00.

On the other hand, in the control group there is no difference found on mean score of psychological distress of AIDS patients from pre and post test. The mean score is same in both pre and post test as M= 106.8. These results accepted the hypothesis of the current study.

Our current research also supported by previous researches. One research conducted in China, to measure the relation among stigma and mental health problems of mental health. These problems included depression, anxiety and shame. To avoid the biasness of methods that are common, time-lag design was used to collect cross-sectional data.

Results of regression showed that there was positive association among stigma and mental problems as anxiety, shame and depression. And social support can be served to weakened that association.

The connection among the stigma and anxiety, depression can be strengthened when social support is low, it can be reduced when social support is high (Li, Liang, Yuan & Zeng, 2020) [11]. Results of a previous research also indicated that people from higher education and higher economic status show less unfair behavior. In the gender, males had more information about HIV and also express more biased attitude (Khan, Bilal & Siddiqui, 2019) [10].

Previous research showed effectiveness of cognitive behavior therapy as it improves the management of symptoms of psychological problems of anxiety, stress, depression and psychological distress. As people who suffer with AIDS also undergo with stress, anxiety, depression and different thoughts which are harmful for them (Brunero, Cowan and Fairbrothe, 2008) [5].

## References

- 1) Azizi, H., Saboory, E., & Ghaderi, S. (2014). The Study of Prostitute Women's Knowledge About Ways of Hiv Transmission in Tehran in 1390. *Journal of Urmia Nursing and Midwifery Faculty*, 11(10), 0-0.
- 2) Beck, A. T., Rush, A. J., Shaw, B. F., & Emery, G. (1979). *Cognitive Therapy of Depression*.
- 3) Bekele, T., Rourke, S. B., Tucker, R., Greene, S., Sobota, M., Koornstra, J., ... & Hwang, S. W. (2013). Direct and indirect effects of perceived social support on health-related quality of life in persons living with HIV/AIDS. *AIDS care*, 25(3), 337-346.
- 4) Bernard, H. R. (2002). *Research Methods in Anthropology: Qualitative and quantitative methods*. Altamira press.
- 5) Brunero, S., Cowan, D., & Fairbrother, G. (2008). Reducing emotional distress in nurses using cognitive behavioral therapy: A preliminary program evaluation. *Japan Journal of Nursing Science*, 5(2), 109-115.
- 6) Drapeau, A., Marchand, A., Beaulieu, P. D. (2012). Epidemiology of psychological distress. In *Mental Illness-Understanding, Prediction and Control*, Retrieved from <https://www.intechopen.com/books/mental-illnesses-understanding-prediction-and-control/epidemiology-of-psychological-distress>
- 7) Endeshaw, M., Walson, J., Rawlins, S., Dessie, A., Alemu, S., Andrews, N., et al. (2014). Stigma in Ethiopia: association with depressive symptoms in people with HIV. *AIDS Care*, 26(8), 935-939.
- 8) George, L. S. (2019). HIV Related Stigma and Discrimination among People Living with HIV/AIDS in Ernakulum District: A Qualitative Study. *Indian J Community Med*, 44(1), 34-37. doi: 10.4103/ijcm.IJCM\_30\_19
- 9) Kapila, A., Chaudhary, S., Sharma, R.B., Vashist, H., Sisodia, S.S., & Gupta, A. (2016). A review on HIV AIDS. *Indian J. Pharm. Biol*, 4(3), 69-73.
- 10) Khan, R., Bilal, A., & Siddiqui, Shakira. (2019). Knowledge About Hiv and Discriminatory Attitudes Toward People Living with Hiv in Pakistan. *Pakistan Journal of Public Health*, 9(1), 37-41. <https://doi.org/10.32413/pjph.v9i1.237>

- 11) Li, J., Liang, W., Yuan, B., & Zeng, G. (2020). Internalized stigmatization, social support, and individual mental health problems in the public health crisis. *International journal of environmental research and public health*, 17(12), 4507.
- 12) Nyblade, L., Stockton, M. A., Giger, K., Bond, V., Ekstrand, M. L., McLean, R., ... & Turan, J. (2019). Stigma in health facilities: why it matters and how we can change it. *BMC medicine*, 17(1), 1-15.
- 13) Tao, J., Wang, L., Kipp, A. M., Qian, H. Z., Yin, L., Ruan, Y., ... & Vermund, S. H. (2017). Relationship of stigma and depression among newly HIV-diagnosed Chinese men who have sex with men. *AIDS and Behavior*, 21(1), 292-299.
- 14) Vander, H. I., Abrahams, N., & Sinclair, D. (2017). Psychosocial group interventions to improve psychological well-being in adults living with HIV. Retrieved from: <https://www.ncbi.nlm.nih.gov/pubmed/28291302>