Original Article

Correlates of perceived Stigma and Depression among the women with HIV/AIDS infection

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Abstract:

Background: Depression, a universal problem for individuals with HIV/AIDS because the disease creates uncertainty and disruption in every aspect of their lives. ***Objectives*:** To assess the level of perceived stigma and depression among women with HIV/AIDS infection and to determine relationship between perceived stigma and depression. ***Methodology***: A cross-sectional study was carried out in Bel – Air hospital located at Panchgani, state of Maharashtra, India during year 2013 among the women with HIV/AIDS infection. By purposive sampling technique, 50 women were enrolled and interviewed by utilizing Standardized data collection tool i.e. stigma perception scale by Sowell et al and CES-D by Radloff after institutional ethical clearance certificate. ***Statistics*:** Descriptive statistics, chi-square test and correlation coefficient was used to analyze the data. ***Results*:** The out of a total 50 HIV infected women maximum, 26(52%) were belonged to the age group of 28 – 36 years. All the women were married out of which majority were widows 28(56%). Among the study subjects, maximum, 25(50%) were having secondary education, followed by 46(92%) as housewives. 38(76%) women were aware of HIV status ranging from 1 month to 2.5 years. However, 43(86%) reported that they had acquired HIV infection from their husband. Almost all women perceived stigma at some or other time of which majority, 26(52%) perceived stigma frequently whereas 19(38%) and 5(10%) perceived stigma always and occasionally respectively. Similarly all the women have some sort of depression and majority, 37(74%) experienced depression most of the time whereas 13(26%) experienced depression occasionally. The perceived stigma and depression have a significant positive correlation as indicated by correlation coefficient. ***Conclusion*:** Moderate to severe degree of stigma and depression was perceived by women with a status of HIV/AIDS infection. A significant positive relationship is also existed between perceived stigma and depression among the women with HIV/AIDS infection.

Keywords: HIV/AIDS; stigma; depression; correlation

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Introduction:

Twenty six years into acquired immunodeficiency disease syndrome (AIDS) epidemic, revolutionary improvement in medical treatment of HIV/AIDS has converted the once life-threatening terminal illness into a manageable chronic disease [1], but what changes these medical advances have brought when people still die because of isolation, stigma, discrimination, hatred and violence. More than medical support, we have reached into an era where psychological demands are to be met in advance.

A person with AIDS experience serious psychological problems as a result of decreased self-esteem or rejection by the family and friends. AIDS has arouse a lot of emotions such as agony, frustration, shame, anger, guilt, fear, panic, loneliness, helplessness, anxiety, insecurity, uncertainty, and depression. AIDS often can result in stigma and fear for those living with the infection, as well as for those caring for them and may affect the entire family. AIDS often results in loss of socio-economic status, employment, housing, health care and mobility. For both individuals and their partners and families, psychosocial support can assist them in making informed decisions, coping

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better with illness and dealing more effectively with discrimination [2].

Depression is a universal problem for individuals with HIV/AIDS because the disease creates uncertainty and disruption in every aspect of their lives. HIV/AIDS and depression are projected to be the two leading causes of disability by 2030 [3]. Depression may have a negative impact on adherence, may affect quality of life, and is a predictor of poor treatment outcome. Depressions have a negative impact on HIV disease progression and the people living with HIV/AIDS (PLHAs) quality of life. HIV-related stigma and discrimination are major "road blocks" to universal access to HIV prevention, treatment care and support [4].

The present study designed to address the stigma and depression perceived by women with HIV/AIDS infection from western Maharashtra, India which is a most important public health and social issue which was yet not addressed. According to the National Aids Control Programme (NACP) released on World AIDS Day 2013, HIV/AIDS remains a major health problem in Maharashtra state as a rank 2nd in India with an estimated 7.47 lakh persons infected with HIV. More than 14,500 people have died due to HIV/AIDS in three-and-half years since April 2009 in India's second largest state of Maharashtra[5].

Material and Methods:

A cross-sectional study was designed for a present study that includes descriptive epidemiological approach. The study setting was purposively selected Bel-Air hospital Panchgani, Maharashtra, a 240 bedded general hospital with all medical disciplines. Bel-Air hospital today is a home to a large number of HIV/AIDs patients from eleven blocks of Satara district, Maharashtra due to quality of HIV/AIDS services. The sample size used for present study was 50 women with HIV/AIDS status by utilizing purposive sampling technique and inclusion criteria of the study. ***Inclusion criteria*:** Women with positive HIV/AIDS status, in age group of 18 – 45 years, attending HIV/AIDS and community care centre at Bel – Air Hospital, Panchgani during data collection period, resident of Maharashtra state and willing to participate in the study. The study was conducted in year 2013 after the institutional ethical clearance certificate.

A standardized questionnaire was used to collect the information from study respondents that includes background information, stigma perception and depression scale. The perceived-stigma scale was developed by researchers of the Family Coping Project, a CDC funded study (1992-1995) in order to examine stressors and resistance factors of rural and urban women with HIV disease and their families residing in Georgia by Sowell et al [6]. The instrument was developed based on an exhaustive review of literature and data from multiple focus groups conducted with rural and urban women infected with HIV. The stigma-perceptions scale consisted of 12 items designed to assess respondents' frequency of experiencing various aspects of HIV-related stigma within the previous six months. Four-point Likert type response options included never (1), rarely (2), sometimes (3), and always (4). A total stigma score (range = 12-48) was obtained by summing the responses of all 12 items. Higher scores indicated higher levels of HIV related stigma. A 20-item self-report scale developed by the Centers for Epidemiological Studies of Depression (CES-D) by Radloff LS [7] was used to measure depression. The scale contained nine components; Sadness(Dysphoria), Loss of Interest(Anhedonia), Appetite, Sleep, Thinking / concentration, Guilt(Worthlessness), Tir ed(fatigue),Movement(Agitation), Suicidal ideation. Participants rated the extent to which they had experienced each item (depressive symptom) in the past week using a four-point response format ranging from "rarely or none of the time" (0) to "most or all of the time" (3). Four items in the scale (item # 4, 8, 12, and 16) were reverse-coded. Responses for each item were summed to obtain the total CES-D score ranging from 0 to 60. Higher scores indicated higher levels of depressive symptoms. As mentioned earlier, a score of 16 or higher has been shown to be significantly correlated with clinical depression.

Pilot study was conducted at Bel-Air Hospital Panchgani to test the feasibility and practicability and further modification of methodology. The data collection was collected by interview method utilizing structured questionnaire during the month of August to October, 2013 at Bel Air hospital Panchgani.

***Statistical analysis*:** The data was entered into a master data sheet and organized and analysed. Descriptive and inferential statistics was applied to describe background information, perceived stigma and depression. Chi-Square test was used to find out the association between perceived stigma, depression and demographic variables whereas correlation coefficient was used to determine the relationship between perceived stigma and depression.

Working definitions:

Perceived Stigma: Stigma refers to unfavorable attitudes and beliefs directed toward someone or

something. In this study stigma refers to perceived or felt stigma refers to an individual's anticipated fear of societal attitudes and potential discrimination due to HIV infection [4].

Depression: Depression is a period of intense sad mood and other physical symptoms that exist nearly every day for at least 2 weeks[17] In this study depression refers to affective components: depressed mood, feelings of guilt and worthlessness, feelings of hopelessness and helplessness, psychomotor

Table 1: Frequency and percentage distribution of sample characteristics n=50

Sr. No	Characteristics	Category	Respondents	
			Frequency	Percentage
1.	Age (in years)	18 – 27	01	2%
		28 – 36	26	52%
		37 – 45	23	46%
2.	Marital status	Married	20	40%
		Unmarried	0	-
		Divorced	02	4%
		Widow	28	56%
3.	Educational status	No formal education	06	12%
		Primary	25	50%
		Secondary	15	30%
		Higher secondary	02	4%
		Graduation	02	4%
4.	Occupational status	Professional	0	-
		Skilled worker	02	4%
		Unskilled worker	02	4%
		Self employed	0	-
		House wife	46	92%
5.	Monthly income	>5,001	10	20%
		4,001 – 5,000	02	4%
		3,001 – 4,000	08	16%
		2,001 – 3,000	06	12%
		<2,000	24	48%
6.	Period since HIV status	1month – 2.5 yrs	38	76%
		2.5 – 5 yrs	06	12%
		5 – 7.5 yrs	0	-
		7.5 – 10 yrs	02	4%
		> 10 yrs	04	8%
7. 1	Have children	Yes	47	94%
		No	03	6%
7.2	HIV status of children	Positive	01	2%
		Negative	37	79%
		Do not know	9	19 %
8.	Reported route of HIV	From spouse	43	86%
		From mother	0	-
		From hospital	01	2%
		Do not know	06	12%

retardation, loss of appetite and sleep retardation[8].

HIV positive status: HIV positive status in this study refers to HIV seropositive status by means of serological tests, polymerase chain reaction test or virological tests.

Results: The data was obtained from 50 women presented in terms of age, marital status, educational status, occupational status, economic status, time since diagnosis, number of children, HIV status of children and route of transmission.

Among the total 50 HIV/AIDS infected women maximum, 26(52%) were belonged to the age group of 28 – 36 years. All the women were married and of which 28(56%) were widows. Among the study subjects, maximum, 25(50%) were having secondary education, followed by 46(92%) as housewives. The 38(76%) women were aware of HIV status ranging from 1 month to 2.5 years however, 43(86%) reported that they had acquired HIV infection from their husband.

The maximum, 24(48%) women were from low economic sector i.e. family income less than Rs. 2000 per month. Majority of women, 42(84%) reported that their children are to be HIV negative (Table 1).

Table 2 reveals that almost all women perceived stigma due to HIV/AIDS infection of which maximum, 26(52%) perceived stigma frequently, whereas 19(38%) and 5(10%) perceived always and occasionally. The participants experienced high level of perceived stigma as indicated by average score of 33.160 ± 6.322 ranging from 18 to 44. According to stigma perception scale, higher scores indicated higher levels of HIV/AIDS related stigma.

Table 2: Stigma perception category distribution of women with HIV/AIDS infection

Stigma Perception Scale				n= 50
Sl. No				
1.	1 – 12	Never	0	-
2.	13 – 24	Occasionally	5	10%
3.	25 – 36	Frequently	26	52%
4.	37-48	Always	19	38%

All the women experienced some form of depression of which maximum, 37(74%) experienced depression most or all of the time whereas 13(26%) experienced depression occasionally or moderate amount of time. The participants had high level of depression as indicated by average score of 42.480 ± 7. 993 ranged from 23 to 55. If CES-D score is ≥16, the depression is highly correlated with a clinical diagnosis of depression (Table 3).

Table 3: Depression category distribution of women with HIV/AIDS infection

CENTRE FOR EPIDEMIOLOGICAL STUDIES DEPRESSION SCALE				**n= 50**
Sl. No	**Score**	**Category**	**n**	**%**
1.	0	Rarely or none of the time	0	-
2.	1 -20	Some or a little of time	0	-
3.	21 – 40	Occasionally or moderate amount of time	13	26%
4.	41 – 60	Most or all of the time	37	74%

Table 4: Relationship between perceived stigma and depression among women with HIV/AIDS infection

Group	**Parameters**	**Mean**	**SD**	***R***	**P value**
Women with HIV disease	Perceived stigma	33.160	6.322	0.7027	<0.0001
	Depression	42. 480	7.993		

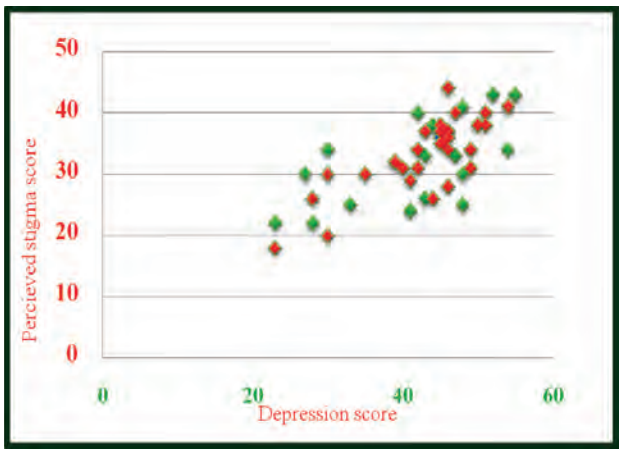

Fig 1: Correlation between perceived stigma and experience of depression by women with HIV/AIDS infection

Table 4 and Fig 1 reveals that the perceived stigma and depression have a significant positive correlation as indicated by value of correlation coefficient (r) of 0.702 and p value of <0.0001. It shows that perceived stigma influences depression in women with HIV/AIDS infection.

Table 5: Association between perceived stigma and demographic variables

Socio Demographic variable	Perceived stigma			chi- square	p value
	occasionally	Frequently	Always		
Age					
18 – 27	0	1	0	3.055	0.2171
28 – 36	1	14	12		
37 – 45	4	11	7		
Marital status					
Married	1	10	9	0.9306	0.6279
Unmarried	0	0	0		
Divorced	1	0	1		
Widow	3	16	9		
Educational status					
Illiterate	2	11	12	2.579	0.2754
Primary education	2	12	7		
Secondary education	0	2	0		
Higher secondary	1	1	0		
Graduation	0	0	0		
Occupation					
Professional	1	0	0	8.612	0.0135*
Skilled worker	1	1	0		
Unskilled worker	0	1	0		
Self employed	0	0	0		
House wife	3	24	19		
Monthly Income					
>5,001	1	3	5	2.450	0.2937
4,001 – 5,000	0	2	0		
3,001 – 4,000	0	3	5		
2,001 – 3,000	0	4	2		
<2,000	3	14	7		
Period since HIV					
1month – 2.5 yrs	2	19	17	5.565	0.0619
2.5 – 5 yrs	1	3	2		
5 – 7.5 yrs	0	0	0		
7.5 – 10 yrs	1	1	0		
> 10 yrs	1	3	0		
Have children					
Yes	5	25	17	1.223	0.5425
No	0	1	2		
HIV status of children					
Positive	0	1	0	1.757	0.4155
Negative	5	19	14		
Do not know	0	6	5		
Route of transmission					
From spouse	4	22	17	0.335	0.8464
From mother	0	0	0		
From hospital	0	1	0		
Do not know	1	3	2		

* = significant p value 95% confidence interval

Table 6: Association between experienced depression and demographic variables

Socio– Demographic variable	Depression		chi- square	p value
	Occasionally	All time		
Age				
18 – 27	0	1	0.363	0.834
28 – 36	7	19		
37 – 45	6	17		
Marital status				
Married	7	13	0.7320	0.3922
Unmarried	0	0		
Divorced	0	2		
Widow	6	22		
Educational status				
No education	7	18	0.1040	0.7471
Primary education	5	16		
Secondary education	0	2		
Higher secondary	1	1		
Graduation	0	0		
Occupation				
Professional	0	0	0.2745	1.1940
Skilled worker	1	1		
Unskilled worker	1	1		
Self employed	0	0		
House wife	11	35		
Monthly Income				
>5,001	3	7	0.2281	0.6330
4,001 – 5,000	2	0		
3,001 – 4,000	0	8		
2,001 – 3,000	3	3		
<2,000	5	19		
Period since HIV				
1month – 2.5 yrs	8	31	3.011	0.8270
2.5 – 5 yrs	2	3		
5 – 7.5 yrs	0	0		
7.5 – 10 yrs	0	2		
> 10 yrs	3	1		
Have children				
Yes	13	34	0.6079	0.4356
No	0	0		
HIV status of children				
Positive	0	1	0.05665	0.8119
Negative	9	28		
Do not know	4	7		
Route of transmission				
From spouse	10	33	0.3992	0.5275
From mother	0	0		
From hospital	1	0		
Do not know	2	4		

The level of perceived stigma among the women with HIV/AIDS infection is significantly associated with their occupational status ($p<0.05$) (Table 5).

Statistical analysis using Chi-square test does not shows any significant association between experienced depression by women with HIV/AIDS infection and demographic variables as indicated by p value > 0.05 at 95% confidence interval (Table 6).

Discussion:

The present study have been shown that out of 50 women with HIV/AIDS infection maximum, 52% of women belonged to the age group of 28-36 years. A study conducted by Phaladze [9] reported that 61.2% women were in age group of 27 -36 years and difference could be due to study is conducted in rural area of India, a developing country however, Phaladze [9] findings were from developed would. Socio-cultural factors in Rural India could be responsible for poor health seeking behavior among women.

All the women in this study were married and almost similar findings have been also noted by Jebessa S from Ethiopia[10] where more than 92% were married women. The 56% women were widows and study conducted by Bimal[11] also observed similar findings. The 50% of the women in our study have been educated upto secondary level and a similar finding has also been reported by Lasiele Y [12] among Nigerian women. Majority of women, 92% were housewives however, study conducted by Jebessa, in Ethiopia[10] observed that 70.1% women were housewives and the difference could be due to rural culture of study subjects.

The 48% respondents were from poor economic background observed in the study and similar findings also have been noted by Bimal[11] among South India women. It indicates that poverty, illiteracy and lack of knowledge could be responsible for HIV/AIDS transmission in Indian community.

In present study maximum, 76% women knew their HIV/AIDS status which was ranging from 1 month to 2.5 years before the time of interview. Almost a similar finding has also been reported by Thom [13]. The 86% women reported that they had acquired HIV infection from their husband. A study conducted by Gangakhedar [14] among India women also observed almost similar findings i.e. 85% women were infected due to HIV/AIDS through generally their spouse. Similarly Thom [13] also has been reported in his study that 91.06% women had become infected with HIV through a regular partner.

In present study 52% participants experienced high level of perceived stigma as indicated by average score of 33.160 ± 6.322. A study conducted by Bimal[11] from South India also observed severe personalized stigma as indicated by average score of 28.8% (24.3-33.2).A similar finding has been also noted by Murphy D [15]. It was also observed that mothers reporting high levels of HIV-related stigma scored significantly lower on measures of physical, psychological, and social functioning. Findings of present study show high levels of depression among HIV positive women indicated by average depression score of 42.480 ±7.993.

Similar findings have also been noted by Nancy et al **[16],** Bennetts et al [17] and Shanthi AG [18].

Mothers' levels of depression were also significantly higher when their levels of stigma were higher. The high levels of stigma have been linked with lower self-concept, poorer emotional outcomes, and greater psychological distress in mothers with HIV. A study conducted by Sandelowski [19] found that both perceived and enacted stigma was pervasive in the lives of HIV-positive women. HIV-related stigma was intensified in women because they were women. Stigma management largely involved efforts to control information in the service of preserving social relations and maintaining moral identity. The perceived stigma and depression have a significant correlation as shown by p value <0.0001 which is moderate positive indicated by an *r* value of 0.7027. It shows that perceived stigma influences depression in women with HIV disease. Similar finding was also noted by Endeshawl [20] from Ethiopia indicating that higher levels of HIV-related stigma were significantly associated with higher levels of depressive symptoms ($p< 0.001$). A study conducted by Emlet [21] also reported that stigma was positively and significantly correlated with depression ($r = 0.627$, $p = 0.001$).

Conclusion:

Based on the present study, it is concluded that high level of stigma and depression was perceived by women with HIV/AIDS infection residing in rural area of western Maharashtra, India. Further, housevies were commonly affected by the stigma and depression in the community.

Ethical consideration:

Institutional ethical clearance certificate and permission from Bel-Air Hospital Panchgani, Maharashtra was obtained. Informed consent was also obtained from study respondents and confidentiality was maintained.

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Conflict of interest: None declared

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