Original Research Article

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A cross sectional study to assess the satisfaction level among people living with HIV/AIDS in a hilly state of northern India

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ABSTRACT

Background: Patient satisfaction is the patient's perception of care received compared with the care expected. Measurement of patient satisfaction helps in understanding patients' experiences of health care, identifying problems and evaluation of health care. Increased patient satisfaction leads to increased patient retention and decreases medical malpractice claims. Dissatisfied patients may have worse outcomes as they may not follow treatment plans. The objective of the study was to determine the satisfaction level among people living with HIV/AIDS visiting ART Centre IGMC Shimla.

Methods: A cross sectional study was conducted among >15 years from September 2016 to August 2017 in ART Centre IGMC Shimla and satisfaction level was assessed by using the PSQ18 instrument.

Results: Total 160 participants were enrolled in study among which 71.9% were males while 92.5% were above 30 years of age. Most of the patients were asymptomatic (currently not ill) at the time of consultation and their mode of disease transmission was sexual. The mean scores of PSQ-18 domains i.e. general satisfaction, technical quality, interpersonal manner, communication, financial aspects, time spent with doctor, accessibility and convenience was calculated. Highest score in interpersonal manner, time spent with doctor (3.99±0.12) and lowest score in general satisfaction (3.77±0.54). There was no statistically significant difference between overall satisfaction in relation to different socio demographic and clinical variables found in our study.

Conclusions: Our study reflects that patients were much satisfied with the way health care providers were treating them and spent time with them while they were dissatisfied with something about the health care they were receiving.

Keywords: HIV, AIDS, Satisfaction level, PSQ18

INTRODUCTION

Patient's satisfaction is the patient's perception of care received compared with the care expected by them.¹ Its measurement helps in understanding patient's experiences of health care, identifying their problems and evaluation of health care. If patient satisfaction increases, it leads to increase patient retention and decreases medical malpractice claims. Furthermore, a satisfied patient is more likely to develop a longer lasting rapport with their health care provider, leading to better

compliance and continuity of care. Dissatisfied patients may have worse outcomes as they may not follow the required treatment plans.²

Patient satisfaction has also been considered as an important part when evaluating the health outcomes and quality of care.³ Measurements of patient satisfaction could not only help to assess the performance of health care services and predict treatment adherence and outcomes, Besides it will enhance appropriate communication and build stronger health worker–patient

relationship based on identified gaps and barriers to effective performance of HIV/AIDS prevention and control programs from the patients' perspective.^{4,5}

Survey of patient's satisfaction is an important tool to get feedback from the people. Also it is a means of measuring the effectiveness of health care delivery in a particular area. This data about patient satisfaction can serve as a tool in decision-making and learning. It can also serve as a means of holding health care providers accountable. Thus the issues/aspects of satisfaction and dissatisfaction can be explored which may draw attention of the health care providers and administrators in order to monitor performance, determine patient's needs, plan the development of services and provide evidence to support applications for financial support and expenditure.

Much of the published data about this topic has been obtained from the studies conducted in the Western part of world. There is limited information about satisfaction studies among people living with HIV (PLHIV) in India. Considering the fact that, there is paucity of literature and low prevalence rate of HIV/AIDS in our state, this study was planned to determine the level of satisfaction among people living with Immune suppressed state attending outdoor patient settings at Indira Gandhi Medical College, Shimla.

METHODS

The present cross-sectional study was conducted at the Anti-retroviral therapy (ART) centre of IGMC Shimla among people living with immune suppressed state. Patients attending out-patient department (OPD) services at the ART centre, IGMC Shimla constituted the study population. The study included people living with immune suppressed state whose age >15 yrs and duration on ART >6 months, who had been presented to the OPD within the study period September 2016 to August 2017. All the consecutive patients seeking treatment at ART centre IGMC Shimla were included for the purpose of the study. In depth interviews were conducted in a separate room so that confidentiality of information, privacy and anonymity of participants was maintained.

The data was collected and entered into MS Excel sheet following which the same was transferred to statistical software EPI info v7. Means±SD was calculated for continuous variables. The categorical data was analysed

with chi square or fisher exact test whichever was applicable. The differences between mean scores of various domains of PSQ18 were analysed using ANOVA test.

The approval for the above study was sought from Institutional Ethical committee and HPSAC through principal IGMC Shimla. Data was collected according to the guidelines set up by ICMR (1994) and Helsinki declaration (modified 2000). Patients were informed of the aims, methods, the anticipated benefits and potential risks and written informed consent were obtained from all the patients before being included in the study with a right to abstain from participation in the study or to withdraw consent to participate at any time of the study. In patients age <18 years, written informed consent was obtained from the guardians.

Inclusion criteria

Inclusion criteria were all people living with Immune suppressed state whose age >15 yrs visiting ART centre at IGMC Shimla; duration on ART >6 months.

Exclusion criteria

Exclusion criteria were terminally ill patients and who had other co-morbid disorders like tuberculosis, hepatitis, cancers, cognitive impairment, etc. were excluded; patients who refused to participate in the study.

RESULTS

Total 160 patients were enrolled in study among which 115 (71.9%) were males and majority of participants 67 (41.9%) were in the age group of 30-40 years. Mean age of the patients was 41.69±8.86 years (Table 1).

Among the total patients, 103 (64.4%) were of normal BMI. Majority of males were of normal BMI, general category, Hindu by religion and working as farmers or in government services while majority of females were overweight, of other category i.e. OBCs/STs/STs, minorities (i.e. Christians, Muslims, and Buddhists) by religion and home makers by occupation. 45% patients had primary level of education and 15.0% patients were illiterate. Only 6.2% patients had tertiary level of education i.e. post-graduation or above and all are males none of them were female (Table 2).

Table 1: Age and gender distribution of the study participants.

Age	Male	Female	Total (%)	(χ^2)	P value
≤30	8 (66.6)	4 (33.3)	12 (7.5)		
31-40	43 (64.2)	24 (35.8)	67 (41.9)		
41-50	49 (77.8)	14 (22.2)	63 (39.4)	0.17	0.67
51-60	10 (83.3)	2 (16.7)	12 (7.5)		
>60	5 (83.3)	1 (16.7)	6 (3.8)		
Total	115 (71.9)	45 (28.1)	160 (100)		

Table 2: Various socio-demographic variables of study participants.

Normal 83 Overweight 9 Level of education Illiterate 11 Primary school 44 Secondary school 44	7 (70.88) -8 (66.7) -0 (74.1)	21 (20.4) 8 (47.1)	40 (25.0) 103 (64.4) 17 (10.6) 24 (15.0) 72 (45.0) 54 (33.8)	(χ²)8.855.02	0.012*
Normal 82 Overweight 9 Level of education Illiterate 11 Primary school 44 Secondary school 44	7 (70.88) -8 (66.7) -0 (74.1)	21 (20.4) 8 (47.1) 7 (29.2) 24 (33.3) 14 (25.9)	103 (64.4) 17 (10.6) 24 (15.0) 72 (45.0) 54 (33.8)		
Overweight 9 Level of education Illiterate 11 Primary school 44 Secondary school 46	7 (70.88) -8 (66.7) -0 (74.1)	8 (47.1) 7 (29.2) 24 (33.3) 14 (25.9)	17 (10.6) 24 (15.0) 72 (45.0) 54 (33.8)		
Level of education Illiterate 1' Primary school 4' Secondary school 4'	7 (70.88) -8 (66.7) -0 (74.1)	7 (29.2) 24 (33.3) 14 (25.9)	24 (15.0) 72 (45.0) 54 (33.8)	5.02	0.17
Illiterate 1' Primary school 4' Secondary school 40	8 (66.7) 0 (74.1)	24 (33.3) 14 (25.9)	72 (45.0) 54 (33.8)	5.02	0.17
Primary school 48 Secondary school 46	8 (66.7) 0 (74.1)	24 (33.3) 14 (25.9)	72 (45.0) 54 (33.8)	5.02	0.17
Secondary school 40	0 (74.1)	14 (25.9)	54 (33.8)	5.02	0.17
	· · · · ·		, ,		0.17
	0 (100)	0	10 (5 0)		
Tertiary*			10 (6.2)		
Caste					
General 94	4 (74)	33 (26)	127 (79.4)	1.39	0.24
Others* 2	1 (63.6)	12 (36.4)	33 (20.6)		
Religion					
Hindu 1	11 (72.5)	42 (27.5)	153 (95.6)	0.78	0.37
Non-Hindu 4	(57.1)	3 (42.9)	7 (4.4)		
Occupational status					
Agricultural worker 42	2 (100)	0	42 (26.3)		0.000*
Govt. service 20	26 (100)	0	26 (16.2)	155.15	
Homemakers 0		44 (100)	44 (27.5)		
Others* 4	7 (97.9)	1 (2.2)	48 (30.0)		
Marital status					
Single 9	(81.8)	2 (18.2)	11 (6.9)	19.52	0.0001*
Married 90	0 (80.4)	22 (19.6)	112 (70.0)	19.32	0.0001*
Divorced/separated/widowed 10	6 (43.2)	21(56.8)	37 (23.1)		
Living with					
Living alone 8	3 (80)	2 (20)	10 (6.3)		
Living with spouse 88	88 (82.2)	19 (17.8)	107 (66.9)	22.32	0.0000*
Living with family/relative/without	9 (44.2)	24 (55.8)	43 (26.9)		
spouse	9 (44.2)	24 (33.6)	43 (20.9)		
Family history of HIV					
None 5	7 (93.4)	4 (6.6)	61 (38.1)		
Wife (+ve) 50	6 (100)	0	56 (35)	123.94	0.0000*
Husband (+ve) 0		40 (100)	40 (25)		
Parents (+ve) 2	2 (66.7)	1 (33.3)	3 (1.9)		

Table 3: Various clinical variables of study participants.

Clinical variables	Male (%)	Female (%)	Total (%)	(χ^2)	P value
Currently ill					
Yes	9 (60)	6 (40)	15 (9.4)	1.15	0.28
No	106 (73.1)	39 (26.9)	145 (90.6)		
Duration on ART					
6 months – 1 year	14 (58.3)	10 (41.7)	24 (15.0)	2.63	0.26
1-5 years	55 (73.3)	20 (26.7)	75 (46.9)	2.03	0.20
>5 years	46 (75.4)	15 (24.6)	61 (38.1)		
Staging					
Stage I (>500/mm ³)	26 (61.9)	16 (38.1)	42 (26.3)		
Stage II (350-99/mm ³)	39 (78)	11 (22)	50 (31.3)	4.25	0.24
Stage III (200-349/mm ³)	23 (67.6)	11 (32.4)	34 (21.2)		
Stage IV (<200/mm ³)	27 (79.4)	7 (20.6)	34 (21.2)		

Continued.

Clinical variables	Male (%)	Female (%)	Total (%)	(χ^2)	P value
Mode of transmission					
Don't know	57 (93.4)	4 (6.6)	61 (38.1)		
Sexual	54 (58.1)	39 (41.9)	93 (58.1)	23.71	0.0000*
MTC	2 (66.7)	1 (33.3)	3 (1.9)	25./1	0.0000
IDU	1 (100)	0	1 (0.6)		
Blood products	1 (50)	1 (50)	2 (1.3)		

Table 4: Various domains of patient satisfaction questionnaire (PSQ-18).

Sr. no.	Domain score	Mean±SD
1	Domain 1 General satisfaction	3.77±0.54
2	Domain 2 Technical quality	3.89±0.21
3	Domain 3 Interpersonal manner	3.99±0.12
4	Domain 4 Communication	3.85±0.34
5	Domain 5 Financial aspects	3.68±0.52
6	Domain 6 Time spent with doctor	3.99±0.12
7	Domain 7 Accessibility and convenience	3.96±0.15
8	Composite score	70.01±2.83

Table 5: Comparison of mean scores of patients overall satisfaction according to socio-demographic characteristics.

Variables		Overall satisfaction	P value	
Gender	Male	69.93±2.75	0.55	
Gender	Female	70.72±3.04	0.55	
A an amoun (mone)	<30	71.41±1.50	0.07	
Age group (years)	>30	69.90± 2.89	0.07	
	Undernourished	69.83±3.16		
BMI category	Normal	70.00±2.67	0.69	
	Overweight	70.53±2.15		
Doligion	Hindu	70.00±2.85	0.90	
Religion	Non-Hindu	70.14±2.34	0.90	
	Illiterate	69.91±2.63		
Edwartin	Primary	66.83±2.92	0.75	
Education	Secondary	70.35±2.99	0.75	
	Tertiary	69.70±1.70		
	Agriculture	69.45±3.21		
0.0000004	Govt. Service	69.96±2.67	0.46	
Occupation	Housewife	70.18±3.06	0.40	
	Others	70.37±2.29		
	Single	71.36±1.56		
Marital status	Married	69.77±3.10	0.15	
	Div/Sepr/Wido	70.32±2.05		
	Alone	71.40±0.96		
Living with	Spouse	69.69±3.17	0.08	
	family/relative/ without spouse	70.48±1.95		

112 (70%) of the study participants were married. Majority of the males were living with their spouses and had no family history of HIV while female living with their family/relative without spouses and their husbands had positive history of HIV (Table 2).

Most of the male patients were asymptomatic (currently not ill), on ART for last 1-5 years, in stage II at the time of consultation and sexual as their mode of disease

transmission. Majority of females were asymptomatic and on ART for less than 1 year, in stage I and sexual as their mode of disease transmission (Table 3).

The mean scores of PSQ-18 domains i.e. general satisfaction, technical quality, interpersonal manner, communication, financial aspects, time spent with doctor, accessibility and convenience was calculated. The various domain score were 3.77±0.54, 3.89±0.21,

 3.99 ± 0.12 , 3.85 ± 0.34 , 3.68 ± 0.52 , 3.99 ± 0.12 and 3.96 ± 0.15 respectively. The composite score was 70.01 ± 2.83 . So highest score in interpersonal manner and time spent with doctor (3.99 ± 0.12) which reflects that patients were much satisfied with the way health care

providers were treating them and spent time with them and lowest score in general satisfaction (3.77 ± 0.54) which shows that patients were dissatisfied with something about the health care they were receiving (Table 4).

Table 6: Comparison of mean scores of patients overall satisfaction according to clinical characteristics.

Clinical variables		Overall satisfaction	P value
Commontly ill	No	69.92 ± 2.83	0.22
Currently ill	Yes	70.86±2.79	
	Don't know	70.00±2.66	
M-1	Sexual	69.97±2.99	
Mode of	MTC	72.00±0.00	0.62
transmission	IDU	67.00±0.00	
	Blood products	70.50±2.12	
	>500/mm ³	70.11±2.71	
Clinical stage	350–499/mm ³	70.20±2.98	0.88
Clinical stage	$200-349/\text{mm}^3$	69.73±2.51	0.00
	$< 200 / \text{mm}^3$	69.88±3.13	
Dungtion on ADT	6 months-1 year	69.62±2.93	
Duration on ART	1-5 years	70.21±2.58	0.64
	>5 years	69.91±3.10	_

It was found that there was no statistically significant difference between overall satisfaction in relation to different socio demographic and clinical variables i.e. genders, age group, BMI category, education, marital status, currently ill, religion, occupational status, living status, routes of transmission, clinical stage and duration on ART (p>0.05), which shows there is no effect of different socio demographic and clinical variables on the satisfaction of patients (Table 5 and 6).

DISCUSSION

In our study, out of the total patients, majority (71.9%) were males. This might be due to the fact that most of them worked away from their homes and indulged in unsafe sexual practices. This finding is similar to the studies conducted by Liping et al which also observed that males were more as compared to females. 9 Most of the patients (92.5%) were above 30 years of age. Charles et al also observed the similar age groups in their study. 10 In our study, nearly 2/3rd of the patients had normal BMI while one-fourth were undernourished. However, a study conducted by Deshmukh et al observed that 32.8% patients in their study were undernourished. 11 In our study, most of the patients (90.6%) were asymptomatic and only (9.4%) were symptomatic (currently ill) at the time of study. This was the result of free access to treatment which enhanced the proportion of persons under treatment leading to a better health status, without symptoms. Karkashadze et al and Bakiono et al also noted that majority of patients were asymptomatic at the time of study which is quite similar to our study. 12,

In our study, more than half (58.1%) patients had the disease due to sexual route of transmission while 38.1%

patients don't know their mode of transmission. It is likely that they were unaware of the mode of transmission because of low literacy and lack of knowledge about the different routes of transmission of HIV. Similar to our study, Bakiono et al and Naik et al in their studies noted that the main mode of transmission was heterosexual intercourse. 12,14

In the present study, about $1/3^{\rm rd}$ of the patients (31.3%) belonged to stage II and about $1/4^{\rm th}$ (26.3%) of the patients belonged to stage I. Equal number of patients (21.2%) were present in stage III & IV. Similarly, Liping et al noted that 31.6% patients belonged to stage II. However study conducted by Sonani et al found that 60.6% of their patients belonged to stage I and 18.9% patients belonged to stage II. In our study, Mean time since initiation of ART was 4.87 ± 3.49 . Similar to our study, Bakiono et al in their study noted that the mean time since initiation of ART was 5.0 ± 3.1 years. In the study of the patients belonged to stage II.

In our study the mean scores of PSQ-18 domains i.e. general satisfaction, technical quality, interpersonal manner, communication, financial aspects, time spent with doctor, accessibility and convenience and composite score were 3.77±0.54, 3.89±0.21, 3.99±0.12, 3.85±0.34, 3.68±0.52, 3.99±0.12, 3.96±0.15 and 70.01±2.83, respectively. So highest score in interpersonal manner & time spent with doctor (3.99±0.12) which reflects that patients were much satisfied with the way health care providers were treating them & spent time with them. The lowest score in general satisfaction (3.77±0.54) which shows that patients were dissatisfied with something about the health care they were receiving. The findings of our study is quite different to the study conducted by Chakraborty et al who noted that mean

satisfaction is the highest for general satisfaction and least in time spent with doctor.⁶ Vahab et al found that the mean scores of PSQ-18 domains was highest in technical quality & interpersonal manner (4.77±0.26) and lowest in accessibility and convenience was (3.20±0.72), respectively.⁸ Rai et al noted the mean scores was highest in general satisfaction and lowest score in accessibility and convenience score.¹⁶ Holikatti et al observed the mean scores of PSQ-18 domains highest in interpersonal manner and lowest in communication.¹⁷

In our study no statistically significant difference was found between overall satisfaction in relation to different socio demographic and clinical variables i.e. genders, age group, BMI category, education, marital status, currently ill, religion, occupational status, living status, routes of transmission, clinical stage and duration on ART (p>0.05). It means there is no effect of different socio demographic and clinical variables on the satisfaction of patients. Only the mean score of overall satisfaction was found to be statistically significant with cast of the study participants. Patients whose caste was other than general had higher overall score (71.18±2.29) than general (69.70±2.88). Holikatti et al also observed that overall satisfaction scores were not significantly different between any of the socio-demographic groups. 17

CONCLUSION

Majority of the patients were of normal weight, general caste, Hindu by religion. Mostly working as others (MGNREGA, student, shopkeeper, drivers and unemployed), married, living with spouses, no family history of HIV, asymptomatic, >5 years of duration on ART, stage II and didn't know their mode of disease transmission. About 3/4th patients were quite satisfied with their health status. The satisfaction score was. Highest for interpersonal manner and time spent with doctor while it was lowest for general satisfaction. There was no statistically significant difference found between overall satisfaction scores in relation to different socio demographic and clinical variables.

Limitations

Though conducted with a relatively sound methodology, this study nonetheless has few limitations. A smaller study sample due to a time bound project may limit the utility of this study in interpreting clinico-demography of HIV for a diverse population like India, so the findings of this study need to be corroborated in larger sample studies.

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Institutional Ethics Committee

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