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Original Article

The Knowledge, Attitude and Behavior of HIV/AIDS Patients' Family toward Their Patients before and after Counseling

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Abstract

Background: Acquired immunodeficiency may impose considerable consequences on patients' family behaviors toward them. The objective of the present study was to investigate whether a counseling program at Behavioral Counseling Center in the city of Shiraz, Iran could change the attitude, knowledge and behavior of patients' family members.

Methods: 125 HIV/AIDS patients' family members were interviewed, using a valid and reliable questionnaire before and after performing counseling sessions at Behavioral Counseling Center. The findings were analyzed using nonparametric tests.

Results: The age of the participants was 40±13 years. Sixty five percent were female, 63% married and 79% educated. Forty four percent of participants had spousal relationships with their patients. Their knowledge about the main routes of HIV transmission were 9.76 ± 2.59 and10.64±0.88 before and after counseling, respectively (P=0.028). Supportive behaviors of families toward their patients reached to 79% after counseling compared with 44 % before that (P=0.004). Belief to isolate the patients and the practice of this approach at home dropped from 71% to 15% and from 29% to 7% after counseling, respectively (P<0.05). In 30% of participants fear of getting HIV from patients was not changed by counseling, and 24% of patients' spouses did report to avoid protected sex with their HIV infected husbands even after taking part in the counseling program (P>0.05).

Conclusion: Ongoing counseling for HIV/AIDS patients' families at Behavioral Counseling Center of Shiraz did advance their knowledge about AIDS and improved their attitude and behavior toward their patients However, the counseling program did not show remarkable success in some aspects such as the removal of fear about HIV spread in the family or the change of the patients' wives attitude to have protected sex with their HIV infected husbands.
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Keywords ● HIV ● AIDS ● family ● counseling ● knowledge ● attitude ● behavior ● discrimination

Introduction

Acquired immunodeficiency syndrome (AIDS), as an emergent viral disease, spreads all over the world, and takes millions of

lives each year. The victims are mostly 15-49 years old people, especially in developing countries such as Iran.[1-3] AIDS imposes diverse familial, psychosocial, economic and cultural consequences on patients' life.[1] Family members of human immunodeficiency virus (HIV)/AIDS patients may perform discriminative behaviors toward patients and stigmatize them,[4-11] even though these behaviors may be somehow different from the stigma that is induced by the society.[6]

Among HIV/AIDS patients, women and children may be more influenced by such behaviors.[9] Therefore, in addition to ongoing activities to invent new drugs for treatment of AIDS, and efforts to encourage people for applying preventive measures, the establishment of an effective counseling service and support centers for HIV/AIDS patients and their families is undoubtedly a necessity. A number of studies, which stressed the importance and efficacy of such facilities in decreasing stigma and discrimination behaviors toward patients, resulted in the improvement of physical, mental and quality of life for them.[7,11-20] The benefits of family counseling go beyond patients, and include caregivers of these patients as well.[21]

Behavioral Counseling Center (BCC) in the city of Shiraz, Iran, offers counseling to members of HIV/AIDS patients' family, who know about their patient HIV status. This center hosts a sizable number of HIV/AIDS patients and their families each year. The Aim of this study was to find out whether the implementation of counseling for HIV/AIDS patients' families in BCC changes their attitude and knowledge regarding such patients, and reduces their discriminative behaviors toward them.

Materials and Methods

The study is an interventional one conducted in BCC in the city of Shiraz, south of Iran. First all HIV/AIDS patients whose HIV positive status, based on their records, was known by their families were informed about the aims of the study. Then of all those, who agreed to participate in the study, were enrolled. A total of 125 patients were selected using systematic random sampling. The sample size was calculated using $n=z^2\&^2/d^2$, $n=n_{0/1+}n_{0/N}$.

Afterwards, each participant was requested to introduce to us one his family member who knew about his HIV positive status and had a close and trusty relationship with him. Patients who refused to take part in this study, or those whom none of their family members knew of their HIV status were excluded from the study. Then selected members of patients' family members were invited individually, and the objectives of the study were explained to them. Afterwards, each of the patients' family members was interviewed separately using a questionnaire by a psychologist who had also enough knowledge about AIDS. The content and face validity of the questionnaire were examined by Shiraz University of Medical Sciences AIDS expert' opinion, and its reliability (Kuder Richardson; KR_{20}=0.727) was calculated using data from a pilot study on 9 randomly selected cases who responded to binary questions. The questionnaire consisted of questions in regards to participants' demographic characteristics as well as knowledge regarding HIV/AIDS and attitudes/behaviors toward HIV/AIDS patients. After filling the questionnaires, education and counseling were done for the interviewees, using related WHO guidelines.[22,23] After 2 months the participants were interviewed by the same interviewer, and the same questionnaire was completed.

The data were analyzed using Statistical Package for Social Sciences version 11.5. They were first checked for the normality of distribution using Kolmogorov Smirnov test. They were analyzed using descriptive and nonparameteric statistics including McNemar and Wilcoxon tests. A P value of ≤0.05 was considered statistically significant.

Results

The age of the participants was 40±13 years. The number (percentage) of the participants who were female, married or had spousal relationship with the HIV/AIDS patients were 81 (65%), 78 (63%), and 55 (44%), respectively. The number (percentage) of the participants who were patients' mothers, fathers or children were 27 (22%), 8 (7%), and 7 (6%), respectively. Twenty five (20%) of the participants were illiterate, 90 (72%) had high school diploma, and 8 (7%) had university degrees. Ninety four (75%) of the participants were living with the patients in the same place, and 31 (25%) used to live separately. One hundred and five (84 %) of interviewees used to live in urban and the rest were living in rural areas. Nineteen (15%) of responders stated that they were informed about BCC in the city of Shiraz less than 1 month before the interview, 18 (15%) stated that they knew of the center 1-6 months and the rest reported a period of more than >6 months. The sources of participants' information about the center were physicians in 59 (47%) of cases and their patients in 31

(25%) of cases. Only 3 (2%) of the participants had encouraged the patients to refer to BCC.

Seventy five (60%) and 19 (15%) of participants believed that IV drug abuse and unsafe sexual contacts were the main reasons for their patients' HIV acquisition. Moreover, 27 (22%), 8 (7%), 4 (3%) of them believed that evil friends, family conflicts and unemployment were respectively the cause of the disease acquisition. However, 79 (63%) of the respondents believed that a multitude of factors were the cause of the disease acquisition.

Eighty two (66%) of the interviewees stated that their family knowledge about HIV status of their patients did not have any negative influence on patient-family interactions as compared with 39 (31%) who claimed that patient-family interactions was not similar to that of before. Eighteen (15%) of responders stated that their patients didn't give up IV drug abuse in spite of receiving consult, care and support from BCC. Ninety six (77%) of the participants believed that their families' knowledge regarding AIDS increased, and 55 (45%) explained how the family members had different attitudes and performed different behaviors toward their patients. Seventy six (61%) reported the fear of getting HIV from patients among family members, and 68 (55%) believed that the negative impacts of disease were enormous at home.

Mean score of knowledge of participants about main and non or less likely transmission routes of HIV increased significantly in post counseling stage compared to pre-counseling stage (table 1). The knowledge of responders was not related to their sex, marital status, kind of relationship to patients, education level and place of living. Only a limited number of responders believed that restrictions should be applied for HIV/AIDS patients at home (table 2). Thirty six (29%) stated that their patients were isolated from others before counseling, and 8 (7%) reported isolation after counseling (table 3). More than 80% of the participants believed in the necessity of regular caring of patients by BCC. There was a significantly ($P<0.001$) higher number of participants in post-counseling period (n=110, 88%) than in pre-counseling period (n=64, 51%) who were committed to have close and effective supervision of HIV/AIDS patients. About 2/3 of HIV infected patients' wives stated that they use condom in their sexual contacts with their husbands; however, the number of such respondents did

Table 1: The correct knowledge of the families of HIV/AIDS patients about AIDS before and after receiving counseling at Behavioral Counseling Center, Shiraz, Iran

Item	Before counseling Number (%)	After counseling Number (%)	P value
AIDS is an infectious disease.	101 (80.8)	121 (97)	0.016
Symptoms of AIDS may appear 10 years after being infected by HIV.	63 (50.8)	106 (84.8)	0.012
General appearance of person is not a good and reliable criterion to judge if he is infected by HIV or not.	98 (78.4)	125 (100)	0.063
There is not any definite cure for AIDS.	61 (48.6)	110 (88)	0.001
Using condom during sexual contacts with HIV $^{+}$ patient is a suitable protective method against getting HIV from him.	110 (88.7)	125 (100)	0.5
There is possibility of HIV transmission from asymptomatic HIV $^{+}$ patient to others.	92 (73.5)	121 (96.8)	0.021
Sexual partner(s) of HIV $^{+}$ patient should be tested for HIV.	118 (95.2)	125 (100)	~1.00
Mean score of correct knowledge about transmission routes of HIV (of total 11)	9.76±2.56	10.64±0.88	0.028
Mean score of correct knowledge about Non or less likely transmission routes of HIV (of total 25)	18.73±6.9	23.56±2.56	0.002

Table 2: The attitudes of the families of HIV/AIDS patients toward their patients before and after receiving counseling at Behavioral Counseling Center, Shiraz, Iran

Item	Before counseling Number (%)	After counseling Number (%)	P value
Do you have a positive and supportive attitude regarding your patient?	55 (44.1)	99 (78.8)	0.004
Do you believe that regular follow up of patient by BCC is necessary and effective in their outcome?	109 (87.2)	120 (96)	~1
In your opinion, is it necessary and effective that you accompany your patient in BCC?	102 (81.6)	111 (88.6)	~1
Do you believe that implementation of counseling for HIV/AIDS patients' family in BCC is necessary and effective?	100 (80)	104 (82.9)	~1
Is the patient supported by other family members?	87 (71.3)	96 (77.1)	0.3
Do you believe that applying of restrictions for the patient at home is necessary?	40 (32)	8 (6)	<0.001

not changed significantly by counseling. In both pre- and post- counseling stages 13 (24%) of wives stated that they did not have and did not want to have sex with their husbands after learning that they were HIV positive (table 3).

Discussion

HIV/AIDS patients and especially infected women and children face too many challenges in their lives. Besides medical consequences, they encounter devastating impacts of the disease that influence all or at least many aspects of their lives as well as their partners, families and societies. HIV/AIDS patients are being stigmatized, more or less, in many communities and also are subjected to discriminative behaviors by their families.

After the disclosure that a patient is HIV positive, the fear of spread HIV among family members or its disgrace, may leave negative impacts on patient-family relation, and may result in the more isolation of the patient. Therefore, the correct knowledge of the families of HIV/AIDS patients about the disease as well as their commitment and support toward their patients will improve the quality of lives and productivity of the patients. The role of knowledge, attitudes and behaviors of HIV/AIDS patients' families in the management and outcome of HIV/AIDS patients cannot be ignored. The findings of the present study might be taken as an evidence for the need of an effective counseling service for HIV/AIDS patients' families, as has been recommended in a number of studies.[7,16-20]

Using the above-mentioned rationale, BCC of Shiraz started counseling of HIV/AIDS patients and their families several years ago. However, whether or not it could achieve its goals was unclear prior to doing this study.

This study revealed that the knowledge of HIV/AIDS patients' families about the routes of transmission of AIDS and HIV was nearly satisfactory before counseling, and significantly improved after using the counseling service of BCC. These findings are consistent with those of another study.[15] Counseling at BCC, like similar centers in other countries,[7,10,11,13-15] could significantly change the misperception of families about need to isolate HIV/AIDS patients. Similar to the finding of previous reports,[11-15] the present study showed that after counseling sessions, positive attitudes and supportive behaviors of families toward their patients improved significantly, and a higher degree of commitment to support the patients and supervise their treatments at home were realized.

In spite of the above achievements, the present study could not make a difference in a number of areas. The counseling did not make significant change in the fear about getting HIV from patients in the families, or in the percentage of patients' wives who used to use condom in sexual contacts with their infected husbands. It also couldn't convince patients' wives that they could have protected sex with their husbands. Such failures are in contrast with the achievements other studies, which showed that counseling was able to encourage HIV/AIDS patients' partners to have safe sexual contacts with them.[13,15]

There are two limitations that might affect the conclusion of the present study. First, as far as national and international databases are concerned, there has not been similar study in Iran,

Table 3: The behavior of the families of HIV/AIDS patients toward their patients before and after receiving counseling at Behavioral Counseling Center, Shiraz, Iran

Item	Before counseling Number (%)	After counseling Number (%)	P value
In which Item the patient isolated from other family members?			
Food dishes	14 (11.2)	3 (3)	0.007
Sleep equipments	6 (4.8)	0 (0)	0.031
Toilet	4 (3.2)	0 (0)	0.25
Bathroom	0 (0)	0 (0)	~1
Entertainment and Travel	12 (9.6)	5 (4)	0.039
More than one Item	87 (69.6)	0 (0)	<0.001
Non of them	0 (0)	115 (92)	<0.001
Is there a direct and regular supervision by family members on patient treatment?	64 (51.2)	110 (88.2)	<0.001
If you are patient's wife, do you have sexual relationships with him, despite knowing about his HIV status?			
Yes, by using condom	37 (67)	39 (71)	0.5
Yes ,without using condom	2 (3.6)	0 (0)	0.5
No	13 (24)	13 (24)	~1
Do you accompany patient in his reference to BCC?			
Yes, always	73 (58.4)	86 (69)	0.031
Yes, sometimes	35 (28)	24 (19)	0.001
No	15 (12)	13 (10)	0.62

therefore, no compare and contrast with similar study on the national level is possible. Secondly, we could not include all HIV/AIDS family members in the study, therefore, the implication of the findings might be limited to only some parts of patients' family members.

Conclusion

There is no doubt about the great and determining role of counseling for HIV/AIDS patients' families in increasing their knowledge about HIV/AIDS and in improvement their attitudes and behaviors toward these patients.

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Conflict of Interest: None declared

References

1 Hatami H. Epidemiology and control of AIDS. In Hatami H, Razavi SM, Eftekhar AH, et al, Textbook of Public Health (1st ed.) .Tehran and Shahid Beheshti universities of Medical Science. School of Public Health 2004; 2: 947-8.
2 Global_summary_AIDS [Internet]: world health organization. [Cited: 2010 March 3]. Available in: http://www.who.int/hiv/data/2008_global_summary_AIDS_ep.png
3 Seasonal Report of AIDS. AIDS office. Iran Center for Disease Control .Health Deputy. Ministry of Health; 2008 Dec; p.1-3.
4 Brickley DB, Le Dung Hanh D, Nguyet LT, et al. Community, Family, and Partner-Related Stigma Experienced by Pregnant and Postpartum Women with HIV in Ho Chi Minh City, Vietnam. *AIDS Behav* 2009; 13: 1197-204.
5 Mwinitue PP, Mill JE. Stigma associated with Ghanaian caregivers of AIDS patients. *West J Nurs Res* 2006; 28: 369-82.
6 Abdool KQ, Meyer-Weitz A, Mboyi L, et al. The Influence of AIDS stigma and discrimination and social cohesion on HIV testing and willingness to disclose HIV in rural KwaZulu-Natal, South Africa. *Global Public Health* 2008; 3: 351-65.
7 Freeman M, Nkomo N, Kafaar Z, et al. Factors associated with prevalence of mental disorder in people living with HIV/AIDS in South Africa. *AIDS Care* 2007; 19: 1201-9.
8 Paxton S, Gonzales G, Uppakaew K, et al. AIDS-related discrimination in Asia. *AIDS Care* 2005; 17:413-24.
9 Ngazimbi EE, Hagedorn WB, Shillingford MA. Counseling caregivers of families affected by HIV/AIDS: The use of narrative therapy. *Journal of Psychology in Africa* 2008; 18: 317-24.
10 Tarwireyi F. Stigma and discrimination: coping behaviours of people living with HIV and AIDS in an urban community of Mabvuku and Tafara, Harare, Zimbabwe. *Cent Afr J Med* 2005; 51:71-6.
11 Green D, Devi S, Paulraj L. Care centre visits to married people living with HIV: an indicator for measuring AIDS-related stigma & discrimination. *AIDS Care* 2007; 19: 910-5.
12 Feng MC, Ko NY. Utilizing grief counseling principles to assist a woman whose husband died of AIDS. *Hu Li Za Zhi* 2008; 55: 97-103.
13 Lippmann SB, James WA, Frierson RL. AIDS and the family - Implications for counseling. Aids Care-Psychological and Socio-Medical Aspects of Aids/Hiv1993; 5: 71-8.
14 Kmita G, Baranska M, Niemiec T. Psychosocial intervention in the process of empowering families with children living with HIV/AIDS-a descriptive study. *AIDS Care* 2002; 14: 279-84.
15 Chippindale S, French L. ABC of AIDS: HIV counseling and the psychosocial management of patients with HIV or AIDS. *BMJ* 2001; 322: 1533-35.
16 Orner P. Psychosocial impacts on caregivers of people living with AIDS. *AIDS Care* 2006; 18: 236-40.
17 Palattiyil G, Chakrabarti M. Coping strategies of families in HIV/AIDS care: Some exploratory data from two developmental contexts. *AIDS Care* 2008; 20: 881-5.
18 Machado CYSB, De Figueiredo MAC, De Souza LB. Psychosocial determinants of domestic care by family's members of persons who live with HIV/aids. *Medicina* 2008; 41:153-61.
19 Brouwer CN, Lok CL, Wolffers I, Sebagalls S. Psychosocial and economic aspects of HIV/AIDS and counseling of caretakers of HIV-infected children in Uganda. *AIDS Care* 2000; 12: 535-40.
20 Bowes JG, Dickson JF. Support group for those affected by AIDS in the family. *Am J Hosp Palliat Care* 1991; 8: 39-45.

21 Stetz KM, Brown MA. Physical and psychosocial health in family care giving: A comparison of AIDS and cancer caregivers. *Public Health Nurs* 2004; 21: 533-40.
22 Bayenzadeh S.A, Birashk B, Mottaghipour Y. Counselling in AIDS. Tehran Psychiatric Institute ,WHO Collaborating Center for Mental Health and the Center for Disease Control of Ministry of Health 2003; 10: 8-52.
23 Bayenzadeh S. A, Nouri Ghasemabadi. Counselling Approach to Modeling Healthy Behaviour for Preventing HIV/AIDS in Youth. Tehran Psychiatric Institute, WHO Collaborating Center for Mental Health and the Center for Disease Control of Ministry of Health. Vol 11. 2003. p. 7-31.