

HIV/AIDS knowledge, attitudes and beliefs among a group of Iraqis

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المعرفة والتوجهات والمعتقدات الخاصة بمرضى الإيدز والمعايشين لفيروسه بين مجموعة من العراقيين

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الخلاصة: تهدف هذه الدراسة إلى بناء المرتسم القاعدي للمعرفة والتوجهات والمعتقدات بين العراقيين حول مرضى الإيدز والمعايشين لفيروسه. وقد أجريت مقابلات باستخدام استمارة استبيان في عام 2006 مع 335 شخصاً من المراجعين لمراكز فحص فيروس الإيدز في مدينة بغداد. وقد سمع أغلب المراجعين (بنسبة 82.7%) عن الإيدز، وأغلب المعلومات التي حصلوا عليها عن طريق وسائل الإعلام العامة (بنسبة 71.0%)، ويعرف 91.9% منهم بأن الإيدز مرض معد، وأنه غالباً ما ينتقل عن طريق العلاقات الجنسية (74.9%). ولم يوجد ارتباط بين مستوى المعرفة وقبول رعاية المعاشين للإيدز أو الزواج منهم، ولكن كان هناك ارتباط يعتد به إحصائياً بين مستوى المعرفة والتوجهات السلبية نحو مشاركة الطعام، أو الجلوس في الحافلات، أو العمل في نفس الموقع مع المعاشين لفيروس الإيدز.

ABSTRACT This study aimed to build a baseline profile of knowledge, attitudes and beliefs of Iraqis toward HIV/AIDS. Questionnaire interviews were conducted in 2006 with 335 people attending HIV testing centres in Baghdad. Most respondents (82.7%) had heard about AIDS, mainly from the mass media (71.0%), and 91.9% knew that AIDS is an infectious disease, most commonly via sexual relationships (74.9%). There was no association between knowledge level and acceptance of caring for an HIV-positive relative or marrying an HIV-positive partner, but there was a significant association between low knowledge level and negative attitudes towards sharing food, sitting on the bus and working at the same place with an HIV-positive individual.

Connaissances, attitudes et croyances en matière de VIH/sida dans un groupe d'Iraqiens

RÉSUMÉ Cette étude visait à élaborer un profil de référence des connaissances, des attitudes et des croyances des Iraqiens concernant le VIH/sida. Des entretiens par questionnaire ont été réalisés en 2006 auprès de 335 personnes fréquentant des centres de dépistage du VIH à Bagdad. La plupart des personnes interrogées (82,7 %) avaient entendu parler du sida, principalement par le biais des médias (71,0 %), et 91,9 % d'entre elles savaient que le sida est une maladie infectieuse qui se transmet le plus souvent lors de relations sexuelles (74,9 %). Il n'existait pas d'association entre le niveau de connaissances et le fait d'accepter de s'occuper d'un membre de la famille séropositif ou de se marier avec une personne séropositive, mais il existait une association significative entre un faible niveau de connaissances et des attitudes négatives concernant le fait de partager la nourriture d'une personne séropositive, de s'asseoir dans un bus avec elle ou de travailler au même endroit qu'elle.

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Introduction

Acquired immunodeficiency syndrome (AIDS) is one of the most complex health problems of the 21st century [1]. The AIDS epidemic is in its 3rd decade and has become a pandemic disease that threatens the world population [2]. Moreover, it continues to spread at an alarming rate [3]. Human immunodeficiency virus (HIV) is present in the blood and body fluids of infected individuals, whether symptomatic or asymptomatic. The main modes of transmission are sexual contact, exposure to infected blood or blood products and perinatal transmission [4].

In the absence of a vaccine or cure for HIV/AIDS, public health education is still the best means of combating the pandemic [5]. Public understanding of the virus is growing but many behavioural aspects of the epidemic remain incompletely documented and poorly understood. The impact of prevention programmes on behaviour remains uncertain because they frequently lack complementary information on changes in behaviour or because behavioural data are not collected or are incomplete [6].

Several studies conducted in countries in Asia and North Africa have evaluated HIV/AIDS knowledge, attitudes and practice of certain target populations such as university students [3,5,7], army students [8], soldiers [9], street children/youth [10] and nurses [11]. Young people are particularly at risk of HIV infection because they are in the transition phase of their life, experimenting with sexual experiences and drug use [3]. The present study in Baghdad, Iraq covered a non-homogenous sector of the community (people attending HIV testing centres) and aimed to build a baseline profile of knowledge, attitudes and beliefs regarding HIV/AIDS among the study group. The study was also seen an opportunity to distribute correct information and

to correct misconceptions about different aspects of HIV/AIDS among this group.

Methods

Setting and sample

A cross-sectional study was conducted in the Al-Risafa area of Baghdad. The area has 4 HIV testing centres that perform premarital counselling and testing, testing for Iraqis returning from other countries and voluntary counselling and testing. One centre also issues international health certificates on request.

A convenience sample of 335 subjects from both sexes attending the 4 HIV testing centres from April to June 2006 constituted the study group.

Questionnaire

A questionnaire was constructed to meet the purpose of the study based on similar studies of knowledge and attitudes in different countries [1,3,12,13]. The questions were modified according to Iraqi culture and social norms. The questionnaire included data related to personal information, knowledge and beliefs about HIV/AIDS, sources of knowledge, and attitudes toward HIV patients. The questionnaire was filled through a direct interview.

The possible responses to each question were yes, no or don't know, and items were scored as 2 (correct), 1 (don't know) or 0 (incorrect), with a maximum score of 17. The median score (14) was calculated and the subjects were categorized into high knowledge level (> 14) and low knowledge level (≤ 14) groups.

A pilot study was done on a sample of 25 individuals drawn from the same testing centres. According to their responses, some questions were modified to make them more applicable. The pilot sample was not included in the study.

Ethical issues

Written permission for the study was obtained from the appropriate local authority health manager. The questionnaire was administered to those who gave their verbal consent to participate. Participation was voluntary after explaining the purpose of the study to each individual. The questionnaire was anonymous and participants were assured of the confidentiality of their responses.

Statistical analysis

The data were analysed using SPSS, version 12. The data were expressed as frequencies and percentages. The chi-squared test was used and a P -value of ≤ 0.05 was considered as significant.

Results

A total of 335 respondents were included in the study: 196 (58.5%) males and 139 (41.5%) females. The mean age was 28 (standard deviation 9) years and 94.0% of the respondents were aged 44 years or less (Table 1).

Of the study group 79.1% were unmarried, 83.0% had secondary or higher education and 36.4% were employees. The proportion of respondents with high knowledge increased significantly with increasing educational status ($P < 0.001$) (Table 2). There was no significant association between knowledge level and marital status ($P = 0.16$) but the association with occupation was significant ($P = 0.021$); employees had the greater knowledge than other occupation groups. Couples attending for premarital testing constituted 69.0% of the study group, followed by those attending for international health certificates (19.7%) and people returning from travel abroad (11.3%). Higher knowledge was significantly associated with attending for travel-related reasons compared with premarital testing ($P = 0.012$) (Table 2).

A high proportion of the study group (277, 82.7%) reported having heard about HIV/AIDS. Mass media was the main source of knowledge for 238 respondents (71.0%), principally local television and satellite channels (49.3%), followed by newspapers and magazines (7.2%), folders/leaflets (3.6%), radio broadcasts (3.0%) or all of these (8.1%). People were the second source of information (145, 43.3%), mainly medical staff (28.7%), followed by friends (7.5%), relatives (6.3%) or all of these (0.9%). Educational programmes were the lowest source of information (31, 9.3%).

The majority of the study group (308, 91.9%) knew that AIDS was an infectious disease (Table 3). A high proportion (72.7%) reported the possibility of transmission of the virus from the infected mother to her infant, while 11.5% denied this possibility while only

Table 1 Age and sex distribution of respondents attending an HIV testing centre in Baghdad

Age group (years)	Female		Male		Total	
	No.	%	No.	%	No.	%
15-24	76	54.7	52	26.2	128	38.2
25-34	47	33.8	91	46.4	138	41.2
35-44	10	7.2	39	19.9	49	14.6
45-54	4	2.9	10	5.1	14	4.2
55+	2	1.4	4	2.0	6	1.8
Total	139	41.5	196	58.5	335	100.0

37.5% reported the possibility of transmission of HIV through breastfeeding with 26.0% denying this as a method of transmission (Table 3). Just over half of the respondents (54.9%) thought that AIDS was not a curable disease while 26.6% thought that it was curable and 18.5% did not know. Similar proportions had incorrect and correct knowledge about the existence of a vaccine (34.9% and 39.4% respectively) and 25.7% admitted they did not know

about the presence of a vaccine. A majority of the study group knew that sexual relationships were a method of transmission (251, 74.9%) and a high percentage gave a correct response about blood transfusion (71.6%) and sharing syringes and sharp instruments (68.7%) as methods of transmission. On the other hand, more than half of the sample believed incorrectly that HIV was transmitted by sharing food (56.7%), shaking hands and social

Table 2 Distribution of HIV/AIDS knowledge level according to marital status, educational level, occupation and reason for attendance at centre among respondents attending an HIV testing centre in Baghdad

Variable	HIV/AIDS knowledge level						Statistical tests
	Low (n = 173)		High (n = 162)		Total (n = 335)		
	No.	%	No.	%	No.	%	
Marital status							
Single	144	83.2	121	74.7	265	79.1	$\chi^2 = 1.96, df = 1, P = 0.16$
Married	28	16.2	37	22.8	65	19.4	
Separated	1	0.6	4	2.5	5	1.5	
Educational status							
Illiterate	10	5.8	1	0.6	11	3.3	$\chi^2 = 19.65, df = 3, P < 0.001$
Primary	29	16.8	17	10.5	46	13.7	
Secondary	82	47.4	62	38.3	144	43.0	
Higher	52	30.1	82	50.6	134	40.0	
Occupation							
Housewife	41	23.7	27	16.7	68	20.3	$\chi^2 = 9.72, df = 3, P = 0.021$
Employee	48	27.7	74	45.7	122	36.4	
Manual worker	60	34.7	41	25.4	101	30.2	
Student	24	13.9	20	12.3	44	13.1	
Reason for attendance							
Premarital test	131	56.7	100	43.3	231	69.0	$\chi^2 = 8.82, df = 2, P = 0.012$
International health certificate	24	36.4	42	63.6	66	19.7	
Back from travel	18	47.3	20	52.7	38	11.3	

df = degrees of freedom.

Table 3 Knowledge and beliefs about HIV and its modes of transmission among respondents attending an HIV testing centre in Baghdad (n = 335)

Item	Yes		No		Don't know	
	No.	%	No.	%	No.	%
AIDS is infectious	308	91.9	27	8.1	0	0.0
Possible to transmit AIDS from mother-to-child	249	72.7	34	11.5	52	15.8
Possible to transmit AIDS through breastfeeding	125	37.5	89	26.0	121	36.5
AIDS is curable	89	26.6	184	54.9	62	18.5
Vaccine against AIDS exists	117	34.9	132	39.4	86	25.7
Modes of transmission of HIV						
Sexual relationship	251	74.9	84	25.1	-	-
Blood transfusion	240	71.6	95	28.4	-	-
Sharing syringes & sharp instruments	230	68.7	105	31.3	-	-
Sharing food	190	56.7	145	43.3	-	-
Shaking hands & social relations	188	56.1	147	43.9	-	-
Sharing bathroom & toilet	181	54.0	154	46.0	-	-
Insect bite	169	50.4	166	49.6	-	-

relationships (56.1%), sharing a bathroom and toilet (54.0%) and insect bites (50.4%).

Table 4 shows the attitude of the individuals in the study group toward HIV-positive relatives and shows that there was no significant association between knowledge level and acceptance of caring for an HIV-positive relative ($P = 0.11$) or not changing marriage plans if the partner was found to be HIV positive ($P = 0.53$). However, respondents with a lower knowledge level were significantly more likely to have negative attitudes towards sharing food with an HIV-positive individual, sitting beside an HIV-positive individual in a bus or working with an HIV-positive individual in the same work place ($P = 0.003$, $P < 0.001$ and $P < 0.001$ respectively) (Table 4).

Discussion

The majority of the study group attending for HIV testing were in the reproductive age group, showing that the surveillance activities are properly targeting the at-risk group who are sexually active [3,14,15].

In our study high educational level was associated with higher knowledge about AIDS, which agrees with the findings of a study in Turkey in 2005 [12], presumably as those with higher education can utilize written mass media channels that are not accessible to those with lower educational status. The significant association between non-manual occupation and knowledge level can be explained by the relationship that exists between occupation and educational status.

Mass media, especially the visual, is an accessible, widespread and effective means of knowledge dissemination. Local television and satellite channels represented the main source of information about HIV/AIDS in this study, while people, including medical staff, ranked second. The role of television channels should be emphasized in distributing accurate, active and effective messages to the population, especially the younger age groups, about sexually transmitted diseases. These messages should match our social norms and religious values. Our results agree with the findings of studies conducted in Bangladesh and Thailand [16,17], but disagree with a study conducted in Saudi Arabia in which friends were the

main source of information for males and booklets for females [13].

A majority of respondents gave correct responses about the methods of transmission of HIV, especially regarding sexual relationships, sharing of syringes and sharp instruments and blood transfusion. There were misconceptions about the risk from insect bites and routine daily activities, such as sharing food with HIV/AIDS patients or sharing toilets and bathrooms, which agrees with the findings of other studies [13,18,19].

The majority of the study group accepted being a care provider for an HIV-positive relative, which can be explained by the strong family and social links in our society. The results of this study agree with those of a Ugandan study in 2000 which showed that 86.2% would provide care for relatives with HIV/AIDS [20], but disagrees with a study conducted in Kuwait during 1995 in which 72% were unwilling to take care of AIDS patients [21], and another study conducted in Sana'a, Yemen, which showed that only 21% thought that family members should provide care for HIV/AIDS patient and 51% thought that this care should be the responsibility of specialized staff in specialized centres [22].

Table 4 Distribution of HIV/AIDS knowledge level according to attitudes towards HIV-positive individuals among respondents attending an HIV testing centre in Baghdad

Variable	HIV/AIDS knowledge level						Statistical tests
	Low (n = 173)		High (n = 162)		Total (n = 335)		
	No.	%	No.	%	No.	%	
Agree to care for HIV-positive relative							
Yes	119	68.8	125	77.2	244	72.8	$\chi^2 = 4.303$, df = 2, P = 0.116
No	21	12.1	19	11.7	40	11.9	
Don't know	33	19.1	18	11.1	51	15.2	
Continue with marriage plan if partner is found to be HIV positive							
Yes	59	34.1	46	28.4	105	31.3	$\chi^2 = 1.274$, df = 2, P = 0.529
No	83	48.0	85	52.5	168	50.1	
Don't know	31	17.9	31	19.1	62	18.5	
Eating with an HIV-positive individual							
Continue eating	35	20.2	56	34.6	91	27.2	$\chi^2 = 11.79$, df = 2, P = 0.003
Shift to other table	35	20.2	38	23.5	73	21.8	
Leave the place	103	59.5	68	42.0	171	51.0	
Sitting beside an HIV-positive individual in a bus							
Stay in place	39	22.5	58	35.8	97	29.0	$\chi^2 = 16.66$, df = 2, P < 0.001
Change place	37	21.4	49	30.2	86	25.7	
Leave the bus	97	56.1	55	34.0	152	45.4	
Working with an HIV-positive individual							
Stay in work	36	20.8	59	36.4	95	28.4	$\chi^2 = 13.57$, df = 2, P < 0.001
Ask to shift to another department	71	41.0	66	40.7	137	40.9	
Leave work	66	38.2	37	22.8	103	30.7	

df = degrees of freedom.

Over a quarter of the study group (26.6%) thought that AIDS was a curable disease, which is close to the results of a Turkish study (30%) conducted during 2005 [12]. More than one-third of the respondents (34.9%) thought that there was a vaccine against the disease which is higher than the results of an Iranian study (11%) conducted during 2004 [3]. These false beliefs reflect risky misconceptions which need to be corrected by effective educational information.

Respondents' knowledge level was associated with negative attitudes towards HIV-positive individuals in public places and at work, since the group with higher knowledge level were more

accepting towards contact with HIV-positive individuals than those with low knowledge level. This agrees with the results of the Turkish study where people with good knowledge about AIDS were more tolerant of people with AIDS [12]. However, more than half of our study sample overall would avoid HIV-positive individuals at work or in public.

Conclusion

The sample in this study may not necessarily represent the population of Baghdad but it does represent an important subgroup of Baghdadis for

evaluating knowledge and attitudes towards HIV/AIDS individuals. The study identified many misconceptions and negative attitudes that need to be addressed. A nationwide health education programme through mass media campaigns and introduction of HIV/AIDS education into the secondary school curriculum are recommended to overcome misconceptions, spread awareness and, hopefully, modify behaviour.

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Note from the Editor

We wish to draw the kind attention of our potential authors to the importance of applying the editorial requirements of EMHJ when preparing their manuscripts for submission for publication. These provisions can be seen in the Guidelines for Authors, which are available online at <http://www.emro.who.int/emhj.htm>, and are published at the end of the first issue of each volume. We regret that we are unable to consider papers that do not conform to the Guidelines.