Knowledge, attitudes and beliefs of maritime college students concerning HIV/AIDS

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Summary

Background: Seafarers are one of the largest mobile groups to be considered at high risk of contracting HIV/AIDS. The purpose of this exploratory study was to assess the last course students’ knowledge, attitudes and beliefs concerning HIV/AIDS in maritime colleges at the University of Kocaeli in Turkey.

Material/Methods: The data were obtained using a self-completed questionnaire in January 2003. The questionnaire addressed the age, gender, departments of the students, self-assessed knowledge on AIDS, its transmission, prevention, as well as thoughts and attitudes towards people living with HIV/AIDS. The study group consisted of 192 maritime students. Maritime students have considerable knowledge about HIV and AIDS and they know very well what the concepts of HIV and AIDS mean. 95.8% of students know that seafarers, like everyone else, are at risk of HIV infection because of “peer pressure” to visit night-spots, 90.6% of students know that AIDS is a communicable (infectious) disease, but only 27.1% of students know that anti-retroviral drug treatment cannot cure HIV infection.

Results: The most frequently given answers to the question about transmission of HIV/AIDS are as follows: drinking alcohol and using drugs impairs one’s judgement leading to unsafe sex (93.2%); the sexual transmission of HIV can occur through anyone (92.7%); it is necessary to sterilize dental equipment (89.6%); HIV can be transmitted through an open wound (81.8%); one can get HIV through tattooing (68.2%); and breast milk is not free of HIV (72.4%). The most frequently given answers to the question about preventing transmission of HIV/AIDS were that it is important to ensure all tubing, needles, blood donation and transfusion equipment are not contaminated (93.8%); it is not safe to share needles and other injection equipment (90.6%); you must check condoms for expiry and condition before use (87.5%). The most frequently given answers to the question about thoughts and attitudes towards people living with HIV/AIDS are as follows: there is a need to take precautions when carrying out first aid procedures (87.0%); you can work with people living with HIV/AIDS and not get infected (78.6%); an infected subject can remain healthy and productive (67.7%); an infected subject looks just like everyone (69.8%).

Conclusions: Research findings show good knowledge levels about HIV and AIDS. The general level of awareness regarding HIV/AIDS transmission and prevention has been satisfactory among maritime college students included in the study. However, there are a number of misconceptions and myths such as the one that HIV infection can be cured by anti-retroviral drug treatment. These misconceptions and myths should be corrected so that we will be able to prevent the transmission of HIV/AIDS. The results can be used in planning and implementing health education for maritime students.

Key words: HIV/AIDS • Knowledge • Attitudes • Beliefs • Maritime College • Students • Turkey


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Merchant mariners make important contributions to the global economy. As mobile workers, they encounter unique challenges to maintain a healthy, happy and productive life [1]. However, seafaring is both a dangerous and difficult occupation. Therefore, seafarers need to meet a minimum standard of fitness. By November 1997, ILO / WHO had issued guidelines for medical examinations for seafarers [1,2] because health services are limited at sea. There are no doctors on merchant ships having fewer than 12 paying passengers. Therefore, an officer is specially trained to provide health care [3-5]. Thus, students in maritime schools receive lectures on anatomy, physiology, and hygiene and they also learn signs and symptoms of diseases, how to examine patients, general nursing care, and caring for communicable diseases. Officers are also taught disease prevention and environmental control aboard [3]. In addition, seafarers frequently face the risk of transmissible diseases endemic in the countries they visit. Seafarers are part of a mobile population, and may be vulnerable to HIV, the virus that causes AIDS [6,7].

In order to restrict the AIDS pandemic, it is crucial to induce changes not only in awareness and attitudes, but also in behavior which would reduce the possibility of HIV/AIDS infection [8]. Therefore, the maritime training institutions, maritime college students and seafarers’ organizations must be integrated into the seafarers’ training curriculum on HIV/AIDS issues. Thereby they must contribute to build greater awareness and understanding of HIV/AIDS and its prevention and management in the maritime industry. HIV/AIDS training program aims to raise the level of awareness concerning HIV/AIDS, its transmission and prevention among seafarers in order to ensure happy and healthy family life and to make a continuous contribution to the industry [9].

HIV infection and AIDS (HIV/AIDS) are highly important and controversial public health problems of our age. In more than two decades since the beginning of the HIV/AIDS epidemic, over 60 million people worldwide have become infected, including more than 20 million who have already died, and more than ten persons get infected with the virus every minute. The majority of new infections occur in young adults [10]. It is estimated that more than 40 million people between the ages of 15-24 will have contracted HIV by 2020 [11].

The HIV/AIDS epidemic is on track to be one of the worst epidemics in history, with millions more estimated to be infected by the end of this decade alone, unless more measures are taken. Multiple challenges remain in the areas of prevention, care and treatment, research, infrastructure and capacity development, and funding. As such, the HIV/AIDS epidemic presents numerous political, economic, social, and scientific challenges to nations all over the world [10].

HIV was discovered in the world in 1983. HIV is a virus, a tiny germ. HIV attacks the immune system, which is the body’s defense against disease. HIV is present in the vaginal fluids, semen, blood and breast milk of infected people. An infected woman can also pass the virus on to her baby in the womb or during birth. When an individual is infected with HIV, the immune system responds by producing antibodies against the virus. Antibodies generally develop within 3 to 12 weeks after exposure, but may take as long as 6 to 14 months to develop, which explains why a person may be infected but the tests may not be positive initially. Before any HIV test is performed, the meaning of the test and possible test results are explained, and informed consent for the test is obtained from the patient. The results of the HIV antibody testing are carefully explained to the patient. All test results are kept confidential. Education and counseling about the test results and disease transmission are essential whenever HIV antibody testing is performed [8-12].

HIV was first identified in Turkey in 1985. The history of AIDS started with two patients, and the number of AIDS cases increased every year [11,13]. According to December 2002 statistics of the Turkish Ministry of Health, the total number of HIV-positive patients was 1515 and at the end of 2005 there were 1601 HIV cases in Turkey [14]. About three-fourths of those currently living with HIV/AIDS are male and half of them are heterosexual, 9% are homosexual and 10% are IV drug users [11]. According to the World Health Organization, the above data and similar statistical conclusions for all countries do not reflect the reality. Multiplying this figure by 10 or 100 might give a more accurate picture [15].

WHO reports also that more than 45% of all new infections occur in people aged 15-24 years [13]. Developmental characteristics of young populations include a tendency toward risk-taking behavior and indifference to the importance of preventative measures. Turkey has a young population that may be a group at high risk for HIV/AIDS. An effective educational program could have a direct effect on decreasing the number of HIV/AIDS cases seen in this population [16-18].

Turkey is one of the countries where AIDS education in the society and for health personnel was started rather late. A survey conducted in 1993 on a total of 97 nurses working in 12 hemodialysis centers corroborates this claim [19]. Once it was discovered that the nursing schools were not the primary source of nurses’ knowledge about AIDS, a study was launched to find out the reasons for this and the curricula were examined. It transpired that AIDS was included in nursing education programs only from 1991. Another survey, carried out among medical students in one of the biggest medical schools in Turkey in order to assess their level of knowledge on AIDS, revealed their lack of awareness of the subject [20]. A survey was also carried out among technical university students in one of the biggest universities in Turkey in order to assess their level of knowledge on AIDS and educational needs. That study showed strong evidence of a "knowledge deficit problem" regarding the students’ level of information about HIV/AIDS. The results of the study suggest including a special course on HIV/AIDS as a part of their curriculum [21].

For these reasons, maritime college students were chosen as the subjects for this study. There is a special course on HIV/AIDS in their curriculum. The aim of the course about HIV/AIDS is to make the students understand the facts about HIV/AIDS, understand how HIV is transmit-
Table 1. Distribution of Students’ Answers About HIV/AIDS (N=192)

<table>
<thead>
<tr>
<th>HIV/AIDS-Related Knowledge</th>
<th>True (%)</th>
<th>False (%)</th>
<th>Don’t Know (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>HIV/AIDS stands for Acquired Immune Deficiency Syndrome</td>
<td>155(80.7)*</td>
<td>10(5.2)</td>
<td>27(14.1)</td>
</tr>
<tr>
<td>AIDS is a communicable (infectious) disease</td>
<td>179(93.2)*</td>
<td>4(2.1)</td>
<td>5(2.6)</td>
</tr>
<tr>
<td>Seafarers, like everyone else, are at risk of HIV infection because of “peer pressure” to visit night-spots</td>
<td>184(95.8)*</td>
<td>5(2.6)</td>
<td>3(1.6)</td>
</tr>
<tr>
<td>HIV breaks down the body’s immune system by attacking the body’s white blood cells</td>
<td>154(80.2)*</td>
<td>5(2.6)</td>
<td>33(17.2)</td>
</tr>
<tr>
<td>Anti-retroviral drug treatment can cure HIV infection</td>
<td>46(24.0)</td>
<td>52(27.1)</td>
<td>94(49.0)</td>
</tr>
<tr>
<td>HIV can be transmitted through an open wound</td>
<td>157(81.8)*</td>
<td>20(10.4)</td>
<td>15(7.8)</td>
</tr>
<tr>
<td>Drinking alcohol and using drugs impairs one’s judgement leading to unsafe sex</td>
<td>179(93.2)*</td>
<td>4(2.1)</td>
<td>5(2.6)</td>
</tr>
<tr>
<td>The sexual spread of HIV can occur through anyone</td>
<td>179(93.2)*</td>
<td>4(2.1)</td>
<td>5(2.6)</td>
</tr>
<tr>
<td>Blood must be checked for HIV before any transfusion</td>
<td>172(89.6)*</td>
<td>16(8.3)</td>
<td>6(3.1)</td>
</tr>
<tr>
<td>One cannot get HIV through tattooing</td>
<td>35(18.2)</td>
<td>131(68.2)*</td>
<td>6(3.1)</td>
</tr>
<tr>
<td>It is not necessary to sterilize dental equipment</td>
<td>14(7.3)</td>
<td>172(89.6)*</td>
<td>6(3.1)</td>
</tr>
<tr>
<td>Breast milk is free of HIV</td>
<td>31(16.1)</td>
<td>139(72.4)*</td>
<td>22(11.5)</td>
</tr>
</tbody>
</table>

II. Transmission of HIV/AIDS

| HIV cannot be transmitted through sweating | 147(76.6)* | 32(16.7) | 13(6.8) |
| You must check the condom for expiry and condition before use | 168(87.5)* | 12(6.3) | 12(6.3) |
| It is important to ensure that all tubing, needles, donation and transfusion equipment are not contaminated before a blood transfusion | 180(93.6)* | 2(1.0) | 10(5.2) |
| It is safe to share needles and other injection equipment | 13(6.8) | 174(90.6)* | 5(2.6) |

III. Preventing transmission of HIV/AIDS

| People living with HIV/AIDS look just like you and me | 134(69.8)* | 35(18.2) | 23(12.0) |
| People living with HIV/AIDS can remain healthy and productive | 130(67.7)* | 40(20.8) | 22(11.5) |
| You can work with people living with HIV/AIDS and not get infected | 151(78.6)* | 23(12.0) | 18(9.4) |
| A person with HIV can infect others even though he/she tests negative during the window period | 139(72.4)* | 34(17.7) | 19(9.9) |
| An HIV-positive person and his/her family should see a counsellor and an HIV support group | 170(88.5)* | 13(6.8) | 9(4.7) |
| If you are infected with HIV, you must stop working | 38(19.8) | 117(60.9)* | 7(19.3) |
| You should not allow HIV-positive people to continue working | 61(31.8) | 92(47.9)* | 39(20.3) |
| There is no need to take precautions when carrying out first aid | 9(4.7) | 167(87.0)* | 16(8.3) |

*Correct answers.
were assured that all information given in the form was confidential. To prevent students from influencing one another, data collection was completed at school on the same day. The students completed forms privately in the classrooms. The questionnaires took about 10 to 15 minutes to complete and were collected immediately upon completion.

For statistical analysis of the data, the frequency, percentage and average tests were used.

RESULTS

All of the respondents were male. Their mean age was 21.18 ± 1.29, and ranged between the ages of 17-27. 99.5% (191) of students were single. Altogether, 53.1% (102) of the respondents were in the Marine Engineering Department and 38.5% (74) in the Deck Department, and 8.3% (16) in the Marine Communication Department.

Knowledge, Attitudes and Beliefs regarding HIV/AIDS

In order to measure the students’ knowledge, attitudes and beliefs about HIV/AIDS, they were asked to define the facts about HIV/AIDS, its transmission, prevention and thoughts and attitudes towards people living with HIV/AIDS as ‘yes, no and I don’t know’. According to the facts about HIV/AIDS, as shown in Table 1, 90.6% know that AIDS is a communicable (infectious) disease, 80.7% of the maritime students know that AIDS stands for Acquired Immune Deficiency Syndrome. Table 1 shows the knowledge of the facts about HIV/AIDS among maritime students. Most students responded to the questions concerning the facts about HIV/AIDS thoroughly. A striking finding is that about 49.0% of the students stated that they did not know if HIV infection can be cured by anti-retroviral drug treatment; 24% of those believed that it can be cured.

The most frequently given answers to the question about Transmission of HIV/AIDS are as follows: drinking alcohol and using drugs impairs one’s judgement leading to unsafe sex (93.2%); the sexual spread of HIV can occur through anyone (92.7%); blood must be checked for HIV before any transfusion (89.6%); it is necessary to sterilize dental equipment (89.6%); HIV can be transmitted through an open wound (81.8%); breast milk is not free of HIV (72.4%); and one can get HIV through tattooing (68.2%) (Table 1).

The most frequently given answers to the question about Preventing Transmission of HIV/AIDS are as follows: it is important to ensure that all tubing, needles, donation and transfusion equipment are not contaminated (93.8%); it is not safe to share needles and other injection equipment (90.6%); and you must check condoms for expiry and condition before use (87.5%) (Table 1).

The most frequently given answers to the question about thoughts and attitudes towards people living with HIV/AIDS are as follows: a HIV-positive person and his/her family should see a counsellor and an HIV support group (88.5%); there is a need to take precautions when carrying out first aid (87.0%); you can work with people living with HIV/AIDS and not get infected (78.6%); a person with HIV can infect others even though he/she tests negative during the window period (72.4%); people living with HIV/AIDS look just like you and me (69.8%); people living with HIV/AIDS can remain healthy and productive (67.7%); if you are infected with HIV, you do not have to stop working (60.9%); you should allow HIV-positive people to continue working (47.9%) (Table 1).

DISCUSSION

AIDS is an important public health problem because of the complex, emotional, behavioral, and psychosocial complications that accompany the physical illness. The only way to combat a disease that has no effective treatment is by prevention. The best single way to prevent the disease is through education [9,13,16-18]. Before they could go to a port or sail on board, namely, in their last year at school, Karamürsel maritime college students of Kocaeli University in Turkey have considerable knowledge about HIV and AIDS and they know very well what the concepts of HIV and AIDS mean. The parts responded to correctly by the students are as follows: AIDS stands for Acquired Immune Deficiency Syndrome; AIDS is a communicable (infectious) disease; there is not only one specific symptom for AIDS; seafarers, like everyone else, are at risk of HIV infection because of ‘peer pressure’ to visit night-spots; HIV breaks down the body’s immune system by attacking the body’s white blood cells. Only 27.1% of the students know that anti-retro viral drug treatment cannot cure HIV infection. These results were consistent with findings of the study performed by Ungan & Yaman [21]. Correcting such misinformation will be helpful to reduce transmission of HIV/AIDS.

The parts which the students responded to correctly concerning the facts about Transmission of HIV/AIDS are as follows: HIV can be transmitted through an open wound; drinking alcohol and using drugs impairs one’s judgement leading to unsafe sex; the sexual spread of HIV can occur through anyone; blood must be checked for HIV before any transfusion; one can get HIV through tattooing; it is necessary to sterilize dental equipment; breast milk is not free of HIV. These results were consistent with findings of the study performed by Walker [22].

The parts which the students responded to correctly with respect the facts about preventing transmission of HIV/AIDS are as follows: HIV cannot be transmitted through sweating; you must check condom for expiry and condition before use; it is important to ensure that all tubing, needles, donation and transfusion equipment are not contaminated before a blood transfusion; it is not safe to share needles and other injection equipment. As seen in Table 1, 90.6% of the students are aware of the importance of not sharing needles and other injection equipment, 87.5% know the importance of safe sex and use of condoms. These results were consistent with findings presented in the literature [23-27].

Most of the maritime students have positive attitudes towards subjects living with HIV/AIDS. There were some positive opinions such as the ones that people living with HIV/AIDS look just like you and me (69.8%); people living with HIV/AIDS can remain healthy and productive (67.7%) and you can work with people living with HIV/AIDS and not get...
infected (78.6%). 60.9% of the students believe that people with HIV/AIDS should not have to stop working. In another statement, 47.0% of the students believe that one should allow HIV-positive people to continue working. Another study found out that about half of the students believed that people with HIV/AIDS should be able to attend school and should not have to stop working [25]. According to other studies, the overall percentage of persons with these beliefs ranges from 70% to 80% (8,24,26,27). Correcting such misinformation will be helpful to reduce social isolation for HIV/AIDS-infected people, because HIV/AIDS is not only a health problem but also a social problem, which involves the whole society. As other patients, AIDS patients have a right to have privacy and respect. The most effective way of protecting the health of the people is to help subjects with HIV/AIDS to live like human beings [11].

CONCLUSIONS

Seafarers are part of a mobile population, and may be vulnerable to HIV, the virus that causes AIDS. Education about AIDS should be provided first to those who are at most risk. Educated population will know how to give social support to individuals with HIV/AIDS and prevent themselves from contracting the illness without anxiety.

Maritime college students at Kocaeli University have a good deal of knowledge about HIV and AIDS and they know very well what the concepts of HIV and AIDS mean.

Most of the students have positive attitudes towards HIV/AIDS.

The presented study followed the directives included in the UNAIDS monograph of 2002. National AIDS program, A guide to monitoring and evaluation of education. We believe that the results of this study will contribute to establishment of education and policy concerning HIV/AIDS.

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REFERENCES