Assessment of knowledge among adolescents regarding HIV/AIDS in Chennai, Southern India

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ABSTRACT

Background: The aim of this paper is to assess the knowledge regarding HIV and AIDS among the adolescent students in Chennai, India.

Methods: A cross-sectional design was used in this study. A self-administered questionnaire with 28 items was distributed among 1440 adolescents (720 boys; 720 girls) studying in schools and colleges in Chennai. Data obtained was coded and analyzed by descriptive and analytic statistics and confidence coefficient 95% by SPSS-16. P <0.05 was considered significant.

Results: Results showed that a majority of the adolescents (83%) knew that AIDS was a deadly disease and awareness regarding general aspects of AIDS was 64%. Compared to boys, girls exhibited a better knowledge on 22 out of 28 items (P <0.01 for all). Compared to early adolescents, late adolescents did better on 20 out of 28 item (P <0.01 for all). However, the proportion of correct responses did not exceed 65% for any item in any of these groups.

Conclusions: Our study indicates the presence of substantial lacunae in knowledge regarding AIDS in the population studied. It is therefore suggested that education regarding AIDS and other sexually transmitted diseases not only be incorporated in school and college curricula but should also be taught in detail.

Keywords: Adolescent, HIV/AIDS, Knowledge, School and college students

INTRODUCTION

The word “Adolescent” in Latin means to grow to maturity and it is a period of rapid growth, matched only by fetal growth transiting from dependant childhood to independent adulthood. Normal adolescence is characterized by profound biological, psychological and social developmental changes. It is at this phase of development that sexual awakening starts. Sometimes it is gradual and smooth and at times it is explosive and turbulent. Adolescents are in search of knowledge and it leads to sexual curiosity, feelings, experiments and experiences.

Adolescence is a period where there is a shift of morbidity pattern principally somatic to psycho social problems. Some of them are depression, substance abuse, health risk behavior, HIV & other sexually transmitted diseases. Promiscuous sexual activity is one of the commonest health risk behaviors exhibited by adolescents. In an attempt to satisfy the upsurge of sexual feelings, various forms of sexual behavior are exhibited.

Adolescents are one of those under served segments of the population, partly due to comparatively low morbidity and partly due to complexities of issues involved. The percentage of health visits in this sector would be only 5 to 7%. According to the National AIDS Control Organization, the number of HIV cases less than 20 years
of age is between 15 to 20%. Promiscuity was found to be the cause in 96% whereas perinatal transmission accounted for only 3.15%. The levels of overall (57%) and comprehensive (18.5%) knowledge of HIV/AIDS among different population groups including adolescents were lower. Similarly, the comprehensive knowledge of modes of HIV transmission of in-school adolescents was lower than that of the general awareness or the separate modes of transmission.

Studies from other African countries and eastern India also revealed that comprehensive knowledge of HIV/AIDS ranged from 9% to 42%; however, studies from Brazil and Europe showed a higher (more than 90%) degree of HIV/AIDS and related issues awareness.

This data clearly shows the magnitude of the problem and the need to focus awareness on this important section of population, which is very essential. In AIDS, prevention is cure. For prevention, knowledge about AIDS is mandatory. Thus, the aim of this study was to assess the knowledge of HIV/AIDS among adolescents as it is one of the important aims of the national task force on adolescents.

**METHODS**

A cross-sectional design was used in this study. To assess the knowledge regarding HIV/AIDS, 1440 adolescents ranging from 13 to 20 years within the corporation of Chennai were studied by, separate questionnaires during the period January 2015 - September 2015.

In order to exclude any bias in the study sample, students belonging to different sections of the society were considered. Among the 720 school students both corporation and private schools were included and among the 720 college students both professional (non-medical) and arts college students were included and at the same time, equal sex distribution was also maintained (720 males and 720 females). These adolescents were further stratified into early adolescents (13-16 years) and late adolescents (17-20 years) for the sake of comparison. A common questionnaire was first prepared in English using simple terms and language. The option “No comments” was also given for those who did not want to reveal their true opinion and preferred to be neutral. The head of these institutions were approached and permission was obtained from them. The questionnaires were circulated among the students and they were given a time period of one hour to select the correct answers from a list of possible answers. The students were instructed not to discuss with others and were closely monitored. The students were reassured once again that their answers and their identity will not be revealed to either parents or teachers. All the doubts of these students pertaining to language were explained to them, then and there either in English itself or in vernacular language. The study was done under personal supervision, so as to avoid any unfair means of filling up the questionnaire. Their doubts regarding HIV/AIDS were clarified and the correct answers were revealed to them at the end. It is noteworthy that all adolescents participated in this study with satisfaction. Data obtained were coded and analyzed by descriptive and analytic statistics and confidence coefficient 95% by SPSS-16. A P value <0.05 was considered as statistically significant.

**RESULTS**

Results are mentioned in Tables 1-5. From (Table 1) it can be seen that a majority of the adolescents (83%) knew that HIV/AIDS was a deadly disease and awareness regarding general aspects of HIV/AIDS was 66%. Table 2 and 3 prove that most of the adolescents knew that sexual route is the mode of transmission (88%) and HIV/AIDS is not transmitted by shaking hands or by hugging (87%). They were also aware that HIV/AIDS can be diagnosed by blood test (86%, Table 5). Majority (82 to 87%) had a fairly good knowledge regarding the modes by which HIV/AIDS cannot be transmitted. Less than 50% of adolescents in this study did knew much about the symptoms of HIV/AIDS except for the symptom weight loss (Table 5); moreover they were also deeply ignorant that homosexuals and truck drivers are high risk groups to contract HIV/AIDS (Table 4). The striking feature was that only few (14%) knew that HIV/AIDS can be transmitted by ear and nose piercing/tattooing.

<table>
<thead>
<tr>
<th>Knowledge</th>
<th>Total correct response</th>
<th>Male</th>
<th>Female</th>
<th>P value</th>
<th>Early adolescents</th>
<th>Late adolescents</th>
<th>P value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Expansion of AIDS</td>
<td>69%</td>
<td>46%</td>
<td>54%</td>
<td>&lt;0.001</td>
<td>51%</td>
<td>49%</td>
<td>0.254</td>
</tr>
<tr>
<td>Expansion of HIV</td>
<td>37%</td>
<td>40%</td>
<td>60%</td>
<td>&lt;0.001</td>
<td>55%</td>
<td>45%</td>
<td>0.003</td>
</tr>
<tr>
<td>AIDS is a health problem in other country but not in India</td>
<td>65%</td>
<td>48%</td>
<td>52%</td>
<td>0.036</td>
<td>40%</td>
<td>60%</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>AIDS is a deadly disease</td>
<td>83%</td>
<td>47%</td>
<td>53%</td>
<td>&lt;0.001</td>
<td>46%</td>
<td>54%</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>Causative agent is Virus</td>
<td>79%</td>
<td>46%</td>
<td>54%</td>
<td>&lt;0.001</td>
<td>52%</td>
<td>48%</td>
<td>0.036</td>
</tr>
</tbody>
</table>

Table 1: Comparison of knowledge about general aspects and cause of HIV/AIDS among male vs. female and early vs. late adolescents.
In comparison with male and female knowledge regarding HIV/AIDS, significant differences were noted in many items except for the possibility of transmission of HIV/AIDS by ear and nose piercing/tattooing ($P = 0.036$), HIV/AIDS is not transmitted by shaking hands or by hugging ($P = 0.05$) and truck drivers are the high risk groups for HIV/AIDS infection ($P = 0.614$). Overall, females had a better knowledge on 22 of 28 items compared to males ($P < 0.01$ for all). There were significant differences between early and late adolescents in all aspects of knowledge regarding HIV/AIDS except for the HIV/AIDS symptoms and expansion for the term HIV/AIDS. Overall, late adolescents had better knowledge regarding transmission and high risk groups with $P < 0.001$ for most items.
knowledge 20/28 items compared to early adolescents (P <0.01 for all). However, across the study participants, the proportion of correct response did not exceed 65% for any item in any of these groups.

Based on the appropriateness of response to the 28 items in the questionnaire, the knowledge level of the study group was categorized as adequate knowledge (>75%), moderately adequate knowledge (50%-75%) and inadequate knowledge (<50%). In our study, 43% of students possessed adequate knowledge, 32% had moderately adequate knowledge and 25% had inadequate knowledge as depicted in Figure 1. Overall knowledge regarding HIV and AIDS was compared among male (47%) vs. female (53%) as in Figure 2 and among early (46%) vs. late adolescents (54%) as in Figure 3.

**DISCUSSION**

The awareness about general aspect of HIV/AIDS in our study was only 64%. Whereas, in a study done on the adolescent population of Singapore by Quek et al. it was observed to be 77%. Nearly 79% of adolescents in our study were aware that HIV/AIDS is caused by a virus. On an average almost 75% could identify the modes of transmission correctly but there was a striking deficit in the knowledge regarding the spread through ear & nose piercing/ tattooing (14%). Whereas in a study conducted in U.S.A. by Facente et al. only 33% were able to answer correctly regarding the transmission of HIV/AIDS. But the sample size for the study was only 78 adolescents. This smaller sample size could be one of the possible reasons. Most of the females in our study knew about the transmission of HIV/AIDS from infected pregnant woman to child (59%) compared to the males. Males were more aware of spread by sharing shaving blades or razors. Age wise comparison among the study group revealed that the late adolescent age group (64%) was better informed about the spread of AIDS. There was a large lacuna regarding the knowledge of various symptoms of HIV/AIDS in our study but most of them knew that blood test is done for detection of AIDS.

The study done by Lal et al. has recorded only 45% response regarding awareness that HIV/AIDS is not curable at present in comparison to 62% of positive response in our study. The reason could be because our study included only urban students whereas the former study included rural students also. In our study awareness regarding the preventive measure for HIV/AIDS, male sex scored less (44%) compared to females. Whereas study by Egger et al., males scored 55% which is higher but the study by Egger et al. had an unequal proportion of males and females in the sample. Knowledge and awareness on HIV/AIDS among adolescent school girls is therefore crucial not only in preventing the spread of the virus, but also in addressing the threats posed by HIV/AIDS to education for all goals and other interventions aimed at enhancing girl child education.

**CONCLUSIONS**

The data of our study clearly indicates the presence of substantial lacuna in all aspects of knowledge regarding HIV/AIDS. The main areas of such lacuna are:

a) The symptoms of HIV/AIDS;

b) Modes of transmission; and

c) Prevention.

It is therefore suggested as was also mentioned by 41% of study participants in the questionnaire that education regarding HIV/AIDS and other sexually transmitted diseases not only be incorporated in school and college curricula but should also be taught in detail.
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REFERENCES