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The effects of a social–cognitive method based education on knowledge and attitudes intentions with respect to HIV transmission among students in Maragheh, Iran

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PEER REVIEW

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Comments

The results of this study are interesting and applicable in which authors presented that knowledge can be increased by the educational interventions. The attitude of HIV/AIDS prevention among school learners of continuing education should be changed, and other effective programs such as peer group education, condom promotion and useful and productive life skills are needed.

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ABSTRACT

Objective: To evaluate a social–cognitive method based HIV/AIDS prevention education among students in high schools of a small city in Maragheh, Iran.

Methods: The study was based on a pre–post–quasi experimental design; pre–experimental questionnaires were administered among a total of 369 students chosen from 10 different high schools. We used a validated, self–administered questionnaire as the research instrument. The questionnaires examined validly and reliably with Cronbach’s alpha test (83%). Students were randomly divided to the general physician intervention group and the specialist intervention group for gaining the social–cognitive method based HIV/AIDS prevention education. After two months, the post–experimental questionnaires were administered among the same students.

Results: The mean score of educational pre–experimental questionnaires was 10.1274, and the mean score of post–experimental questionnaires was 12.4309. The difference was significant ($P < 0.001$). On the other hand, the attitude pre–experimental questionnaires mean score was 50.8043, and the post–experimental questionnaires mean score was 51.7446, the difference regarded to attitude was not significant ($P > 0.055$).

Conclusions: Although the social–cognitive method based education was not associated with a change in students’ attitude about HIV/AIDS prevention, but was associated with higher knowledge in this regard. Peer group education, condom promotion and useful and productive life skills taught by trained experts are needed to educate the high school students regarding the health consequences of HIV/AIDS for having a significant effect on their attitude.

KEYWORDS

HIV/AIDS, Adolescents, Prevention, Social cognitive theory

1. Introduction

Human immunodeficiency virus (HIV) infection evolved over 33 million people universally by the end of 2009[1]. Adolescence is known as a period in which any human could be at risk for HIV infection[2]. Teenagers under 18 years old represent 10% of the people living with HIV. Also half of new HIV infections recently occur in people between

the ages of 15 and 24[3]. A consequential procedure in controlling the spread of HIV is educating teenagers to reduce and avoid risky behaviors. Scientific information and interpersonal skills are needed to avoid and reduce sexual risk (e.g. using condoms). Fostering them the knowledge is a principal step in reducing the pandemic of HIV[4].

Adolescence is a transitional period from childhood to adulthood. In this stage of life, engaging in risky

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behaviors such as unprotected sex and injecting drugs is probable for every human. As a result, this period of life is a significant stage to nurture healthy attitudes and behaviors for preventing HIV[2]. Education about HIV prevention and its health consequences in schools is one of the important universal programs. Thus finding the best method for educating students in this regard is a principal step[5,6].

Considering the extending prevalence of HIV infection and taking injecting drug users as the main source of HIV infection in Iran[7], and with the data that Maragheh population is at risk in this context, we conducted this study to identify the importance of HIV prevention education and to distinguish effective methods in this area.

2. Materials and methods

The study method was based on a pre–post–quasi experimental design; pre–experimental questionnaires were administered among a total of 369 students chosen from 10 different high schools. The students were from the first grade to the third grade of high school. We used a validated, self-administered questionnaire as the research instrument in which its validity was reviewed and approved by infectious disease specialists and experts. The questionnaires content examined validly and reliably with Cronbach’s alpha test (83%). The questionnaires had 50 questions of which the first 10 were about students’ demographic data, other 20 questions were about the knowledge and the last 20 were about attitude. The attitudinal questions were prepared in two groups, the first group of vulnerability in their attitude towards HIV infection and their attitude toward the stigma and discrimination to HIV infected patients, while the second group focused on their attitude toward stigma and discrimination to HIV infected patients

After administering pre–experimental questionnaires among volunteer students for the survey, the students randomly divided to the general physician intervention group and the specialist intervention group for gaining the social–cognitive method based HIV/AIDS prevention education. After two months, the post–experimental questionnaires were administered among the same students.

3. Results

A total of 369 students in this study were examined, of which 50% were male and 50% were female. All students were studying in high school and 44% of students were from the first grade of high school. About 83% of students were in the 15–18 years of age group. About 81% lived in urban and 19% lived in rural areas. Among the 369 students, 62% of their fathers had a self employed occupation and 92% of their mothers were housekeeper. A total of 46% of fathers and 53% of mothers had primary education.

About 65% of students introduced doctors as a person of interest for giving them advice about AIDS. Only 4.8% of them chose parents as a consultant and about 53% of the students preferred television as the main source for monition about HIV infection.

The mean score of educational pre–experimental questionnaires was 10.1274, and the post–experimental

questionnaires was 12.4309. The difference was significant in the paired *t*–test ($P < 0.001$). On the other hand, questioners regarding to attitude did not show a significant difference within the paired *t*–test ($P > 0.055$) between the mean scores of pre–experimental questionnaires (50.8043) and the post–experimental questionnaires (51.7446).

4. Discussion

Although the social–cognitive method based education was associated with higher knowledge about HIV/AIDS prevention, it was not associated with changing in students’ attitude in this regard. Our results corroborate the results of Zhou *et al.* whose findings enforce that there won’t be a change in students’ attitude with a onetime education curriculum[8].

We did not find a significant change in students’ attitude. Some other studies show that affecting on promoting students’ knowledge about HIV/AIDS with short education curriculum is much easier than that of affecting on their attitude, but education can have an important effect on both of them[9–11]. Such observed differences in intervention affect are due to different education methods in each study as well as diversity of each research population’s demographic factors which could influence the attitude. Factors such as students’ family and community background, internet access and family education are known to be associated with the level of HIV prevention knowledge and attitude. Attitude might be influenced by different factors and is more austere to measure than knowledge. Only some of those factors can be measured and quantified[2], for example, some studies adopted measuring attitude toward condom use[9,10].

In the results of this study, 53% of students considered television as the main source of information about HIV/AIDS. Television, radio and newspapers (mass media) are important instruments for health knowledge promotion in developing countries, chiefly on the audience who usually watch TV (*e.g.* women and young adults). Thus appropriate programming for mass media can be very effective in informing people especially adolescents[12–15]. Moreover, among multiple accessible methods, using leaders of student groups as peer educator–mentor could have a mesmerizing influence on students’ attitude[11].

Due to the sensitive nature of some questions, we were forced to remove them as a result of ethical and moral issues in Iran, which is one limitation of our survey.

In conclusion, as a result of HIV infection extending worldwide and its burden among adolescence, improving adolescents’ attitude and knowledge toward this issue is mandatory. The social–cognitive method based education was not associated with a change in students’ attitude about HIV/AIDS prevention, but it was associated with higher knowledge in this regard. Peer group education, condom promotion, useful and productive life skills, family included curriculums and continuing education programs taught by trained experts are needed to educate the high school students regarding the health consequences of HIV/AIDS for having a significant effect on their attitude. Furthermore, about their knowledge, increasing mass media HIV/AIDS newsworthy programs including physicians has consequential influences on knowledge level of the society

chiefly among adolescents.

Conflict of interest statement

We declare that we have no conflict of interest.

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Comments

Background

This present study was conducted to evaluate a social-cognitive intervention based HIV/AIDS prevention education among students in high schools in Maragheh, Iran. Educational programs are very substantial interventions for HIV/AIDS prevention. In the research, the education just changed the knowledge. However, the method did not have any positive effect on students' attitude.

Research frontiers

Researchers investigated the interventions which can also change attitude and practice because only having knowledge can not prevent high risk behaviors related to HIV, especially among teenagers.

Related reports

The present study shows that the educational intervention increases the students' knowledge which is in line with other studies. However, the effects on people's attitude in different studies are very controversial.

Innovations & breakthroughs

The study included 369 students of both males and females from 10 different high schools as well as from the first grade to the third grade of high school. By this method, this study can be representative of the population in the province.

Applications

Since HIV infection is extending worldwide and also in Iran, improving adolescents' knowledge toward this issue is very necessary. The study shows the social-cognitive method based education which was associated with higher knowledge. However, it was not associated with a change in attitude. For changing attitude, more and longer interventions like continuing education programs are needed to educate the high school students regarding HIV/AIDS prevention.

Peer review

The results of this study are interesting and applicable in which authors presented that knowledge can be increased by the educational interventions. The attitude of HIV/AIDS prevention among school learners of continuing education should be changed, and other effective programs such as

peer group education, condom promotion and useful and productive life skills are needed.

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