



## Prevention of HIV Through Social Vaccine: A Study on Truck Drivers in A.P. Regional State of South India

### KEYWORDS

AIDS, HIV education, India, truck drivers, prostitutes

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### INTRODUCTION

Of the 42 million people infected by HIV today in the world, 85 percent live in Sub-Saharan Africa and the developing countries of Asia, which together account for less than 10 percent of the Gross national product. While drugs and breast milk substitutes have nearly eliminated mother-to-child transmission (MCT) of HIV in North America and Europe, people in the developing countries remain economically outside their reach. While antiretroviral drugs have dramatically prolonged both the duration and quality of life for most HIV positive people in North America and Europe, they too remain economically outside the reach of most HIV positive people in the developing countries (Sight and Life,3/2000). The only way to prevent the spread the disease in the developing countries is by changing people's behavior through AIDS education programs (Population Reports, 1986). Many National governments are using the electronic and print media, personal contact, counseling, and other methods to educate people on AIDS and safer sex. Thus, at present the best vaccine for HIV prevention is the "preventive and Social Vaccine" which involves spreading education on how to protect oneself against the infection, 100% use of condoms and changing sexual behavior. In fact, the social vaccine has been so successful in Thailand that the infection rate has come down more than 50 percent (The Hindu, dated 09.03.2000),

### METHODS AND MATERIALS

An action oriented research program was launched in 2012 for the truck drivers of Mahabub Nagar District for a period of one year (from December, 2012 to December, 2013).The program was planned to inform the truck drivers about HIV/AIDS, change their attitudes to sex, persuade them to increase the use of condoms for safer sex, and bring about changes in their sexual behavior. This program is the part of the Reproductive and Child Health of Rahul's Medical & Health Services Society, an NGO in Mahabub Nagar district.

#### Objectives of the study

To assess the knowledge and attitude of the truck drivers about HIV/AIDS before program intervention

To assess the knowledge and attitude of the truck drivers about HIV/AIDS after program intervention

To compare the results of pre and post program intervention

#### Sample Size

The sample of respondents consisted of 300 truck drivers. To get them for the study there were many problems which had to overcome. First of all, their availability for

a period of one long year was difficult, they were highly mobile. Most of them were alcoholic and not always sober. Despite these and other hurdles, earnest efforts were made to build up good rapport with them with the help of trained social workers, transport officials and their family members. Good hospitality too was extended to them. These rapport building strategies paid good dividends and helped to win the cooperation of the truck drivers for our study.

### TOOLS DEVELOPED

In order to achieve the objectives of the study, a pilot study was conducted on a purposive basis among 30 truck drivers to find out their level of knowledge of HIV/AIDS, their attitude to pre-marital and extra marital sexuality, use of condoms and their sexual behavior. However, these 30 respondents of the pilot study did not form part of the sample of 300 chosen for the study. Based on the pilot study, three instruments were developed, namely (i) a knowledge test on HIV/AIDS, (ii) attitude scale on sexuality, and (iii) an interview schedule containing questions on the use of condoms for safer sex and sexual behavior of the truck drivers.

#### Knowledge Test

A knowledge test was constructed to assess the level of knowledge of the respondents regarding HIV/AIDS in terms of symptoms of the disease, its dangers, modes of transmission, prevention techniques, diagnosis of the disease etc. The test contains 20 questions. It was conducted twice, i.e., before the commencement of education program (pre-test), and after its completion (post-test).Basing on pre-test results, suitable educational programs on HIV/AIDS through films, counseling, group discussions and the folk media are planned and implemented. At the end of the study, pre and post test difference results were statistically tested to find out the level of significance of the change occurred (increase/decrease in knowledge) through the four interventions, namely films, group discussions, folk media and counseling.

#### Attitude Scale

An attitude scale was developed to find out and measure the attitudes of the truck drivers to HIV/AIDS, use of condoms, pre-marital and extra-marital sex, and to plan suitable educational program to bring about a change in their attitudes towards all the issues already mentioned. This attitude scale contains 18 statements (9 positive and 9 negative).It is three point attitude scales. The minimum and maximum are 18 and 54 respectively. Accordingly, the attitude scale too was administered to the respondents twice (before and after the educational program). The score differences between the two surveys (before the commencement of the program and after its completion) were tested

to know the level of significant changes that occurred in terms of their attitude to AIDS, and the other issues closely connected with it.

### Interview Schedule

An interview schedule was developed and administered to all 300 truck drivers before and after the completion of the educational program. The score differences between the two surveys were statistically tested to find out level of any significant change in the use of condoms for safer sex and change in their sexual behavior. Most of the questions used to measure the respondent's knowledge and attitudes were projective questions intended to infer the behavior of the respondents. Conceptually, in the present investigation, the independent variables are communication variables like films, group discussion, folk media and counseling. In fact, all these input variables for behavioral change among drivers were adopted for all the drivers, to reinforce the development of knowledge, provide credibility for the message and dramatize the situation. The dependent variables of this study are changes in the knowledge and attitudes of the respondents and regular use of condoms for safer sex.

### DATA COLLECTION

The three instruments developed to elicit reliable data (knowledge test, attitude scale and interview schedule) were administered twice to the sample respondents, first before the commencement of the educational programs (pre-survey) and next after their completion (post-survey) to measure the impact of the educational programs on the respondents.

### Social Workers' Training and Roles

In the present study, five master degree holders in social work were appointed, and they were trained for a period of one month well before the commencement of the program. They were trained about HIV/AIDS, use of educational mechanisms to bring about attitudinal change regarding pre-marital and extra-marital sexual behavior if any, use of condoms for safer sex among the respondents, rapport building, counseling techniques, etc. The social workers who were involved in this program performed multiple roles. Initially, they built up very good rapport with the truck drivers and their family members using counseling techniques. The programs were conducted by them in "Telugu", the mother tongue of the truck drivers. Subsequently, they judiciously used the other educational strategies (films, group discussions, folk media and counseling) to provide scientific knowledge to them about HIV/AIDS, the risk involved in pre-marital and extra-marital sex and thus sharpen their awareness. Further, the importance of using condoms to avoid the risk of STD/HIV infection was conveyed by means of films, group discussions, folk media and counseling. In fact, the skills of social workers in building up rapport and communication with them eminently helped several truck drivers to increase their knowledge of HIV/AIDS, the need to change their risky sexual behavior and increase the use of condoms for safer sex.

### PROGRAMME INTERVENTIONS

Based on the pre-survey results, the gaps in the truck drivers' knowledge of HIV/AIDS, their attitude about it, their use of condoms, and sexual behavior were identified and suitable educational programs were drawn up. These programs were conducted for a period of one year to provide the respondents with correct knowledge about HIV/AIDS, to change their attitudes, increase the use of condoms and bring about changes in their sexual behavior. The following

methods/techniques were used for this purpose.

(1) Films, (2) Group Discussions, (3) Folk Media, and (4) Counseling

**Films:** Films on HIV/AIDS were shown to all the respondents once in every two months. Altogether, they were shown six times during the period of investigation. Before screening a film, the proposed date of screening was announced on the notice board of the transport offices well in advance. In addition, the drivers were informed about it in their houses by the social workers. Immediately after screening the films, the truck drivers were given an opportunity to seek clarifications and clear their doubts, if any. Every time a few among them used to ask questions which were answered by the social workers. Thus, the films provided them with essential knowledge about HIV/AIDS, its socio-economic aspects, its symptoms, diagnosis, prevention, treatment, etc.

**Group Discussion:** Once in two months, group discussions were arranged for the truck drivers with the help of trained social workers. The respondents were given an opportunity to discuss their sexual problems and get their doubts clarified on the use of condoms and other HIV/AIDS related issues. The place and date of group discussion were informed to all the respondents well in advance to enable them to be present and participate without fail.

**Folk Media:** Folk media which have long been used as sources of entertainment as well as media to convey the messages, and moral instructions programs were arranged for the truck drivers with the help of folk artists to impress upon the rural audience, the drivers in particular, the mal-effects of HIV/AIDS, to bring about changes in their sexual behavior and encourage them to use condoms for safer sex. This method was useful particularly to the illiterate respondents.

### Counseling

The trained social workers used to meet the truck drivers at the transport offices and at their residences once a month and provide complete information to them on HIV/AIDS in terms of its symptoms, spread of the disease, prevention, dangers of promiscuity, etc., and counsel them to give up promiscuity in their own interest.

### KNOWLEDGE

Before the survey, educational program was commenced; a survey was carried out to identify the extent of knowledge of the truck drivers about the various aspects of HIV/AIDS in terms of symptoms of the disease, its dangers, modes of transmission, diagnosis, prevention techniques etc. The pre-survey clearly showed that the knowledge of the truck drivers in this regard was poor as their educational level was very low, many of them being illiterate, semi-illiterate and only some of them having primary education (Mean Knowledge Score = 8.1).

The truck drivers were exposed for one year to films, group discussions, folk media, and counseling and were helped to acquire sufficient knowledge of HIV/AIDS etc. The next step was to assess whether the respondents had made any significant gain in their knowledge from the educational program. Post-survey was conducted to assess the impact of the educational program on the respondents regarding the knowledge they had gained about HIV/AIDS. The post-survey results clearly showed that there was dramatic increase in the knowledge of the truck driv-

ers. The post-test mean score was 16.4. The obtained 't' value of 13.53 was significant beyond the 0.01 level. Therefore, there was a quantum jump from the pre-survey (mean score: 8.1) to post-survey (mean score: 16.4) due to the knowledge provided to the truck drivers through the educational program. Obviously, the educational program greatly enhanced their knowledge of HIV/AIDS and made a positive impact on them (Table 1)

**TABLE 1 .Pre-Test and Post-Test Results of Knowledge Test on HIV/AIDS**

Variable	Mean Scores		T-value
	Pre-test(N=300)	Post-test(N=300)	
Knowledge	8.1+/- 2.3	16.4+/-10.9	13.53*

**\*Significant at 0.01 level ATTITUDES**

Attitudes denote what one feels or thinks about a particular topic or question. They are personal dispositions which impel individuals to react to objects or situations. Attitude is the most important element of human behavior." Attitudes are not inherited nor are they innate. But, in the course of experience, they may undergo a change. In the present study, before the commencement of the educational program, an attitude Scale was prepared and administered to the respondents to find out their attitude towards the use of condoms, AIDS, pre-marital sex and promiscuity.

The pre-survey results (attitudes) showed a mean score of 19.0. Suitable educational programs were designed and implemented for the truck drivers, and they were provided with sufficient knowledge about AIDS, and AIDS-related issues such as general and particular dangers of pre-marital sex, promiscuity and the use of condoms for a period of one year. The post-test mean score was 43.3. The obtained 't' value of 15.15 was significant beyond the 0.01 level of probability. Compared with the pre-survey mean score (19.0), the post test mean score (43.3) demonstrated that there was a considerable change in the attitude of truck drivers after their exposure to the educational programs (Table 2).

**TABLE 2.Pre-Test and Post-Test Results of the Attitude towards HIV/AIDS**

Variable	Mean Scores		T-value
	Pre-test(N=300)	Post-test(N=300)	
Opinion	19.0 +/- 11.31	43.3 +/- 25.39	15.15*

**\*Significant at 0.01 level USE OF CONDOMS**

The use of condoms began to spread in rural India only during the last three of four decades, after the revitalization of the family planning program. Men need to know about contraceptive methods and understand the importance of condoms in preventing births and to get protection from STIs. Some men do not use condoms because of their fear that it comes in the way of sexual satisfaction for either partner or both. They like to have skin contact during intercourse. Thus, many do not use condoms at the time of sex without minding the consequences of unprotected sex, especially with commercial sex workers.

The survey revealed that 120 truckers out of 300 were promiscuous/ engaged in pre-marital sex. In the present study, before the educational programs were started, an attempt was made through a survey to know how many truck driv-

ers who were promiscuous or engaged in pre-marital sex were using condoms. The survey revealed that the use of condoms by them was very low for different reasons. Only 49 out of 120 respondents who were promiscuous or engaged in pre-marital sex were using condoms and the remaining 71 did not. It means that only 41 per cent of the 120 truck drivers were using condoms and remaining 59 per cent of the truckers were participating in unprotected sex.

When the importance of condoms for safer sex was explained to the respondents by our social workers, majority of those given to a promiscuous sex life could realize the necessity of using a condom during sex as a protective device. As a result, the post-test results clearly indicated that the use of condoms increases perceptively. The post-survey showed that 104 respondents were found using condoms whereas 49 were using them before. It means that the majority of the promiscuous respondents who were not using condoms at the time of launch of the program started using them to protect themselves from STIs. Thus, the educational programs made an impact on the respondents, and significantly increased the use of condoms by the vulnerable truck drivers (Table 3)

**TABLE 3: Percentage Distribution of Respondents by Use of Condoms Before and After the Educational Program**

Variable	Mean Scores		Percentage increase
	Pre-test(N=120)	Post-test(N=120)	
Use of condoms	49(40.83%)	104(86.67%)	45.84%

**\*Significant at 0.01 level**

**SEXUAL BEHAVIOUR**

Sexual behavior of people depends not only on physiological and psychological factors but also on their education, occupation, socio-economic and cultural background. Those who were better educated generally exercise restraint in matters of sex, pre-marital or extra-marital. Those who are engaged in odd, occasional and irregular jobs such as truck drivers are likely to engage in sex irrationally. In the social environment they live, not much importance is attached to privacy or moral scruples which bind others who are more securely employed. Such people are more vulnerable to STIs and HIV infections than those engaged in other occupations. The vast majority of people who attend government clinics in the teaching hospitals of Andhra Pradesh are those who are engaged in odd jobs and who form the high risk group of the population.

Thus, it is clear from the data of this study that a good percentage (40 per cent) of truck drivers among the respondents (120 out of 300) indiscriminately indulged with the sex workers in pre-marital and extra-marital sex. After conducting for a year the educational programs specially designed to bring about a change in sexual behavior. There was a perceptible change, which was reflected in the post test results. Counseling, group discussions and exposure to the message through the folk media did bring down promiscuity and pre-marital sex to a significant level. The results indicated that only 57(47.5 per cent) of the truck drivers continued with their old sex habits in spite of the concerted interventions on their behalf. This means that more than 50 per cent of the truck drivers (63) had given them up. (Table-4)

**TABLE 4. Percentage Distribution of Respondents by Promiscuity Before and After the Educational Programs**

Variable	Total Sample = 300			
	Pre-test(N=120)		Post-test(N=120)	
	No	%	No.	%
Promiscuity	120	(40.0)	63	(52.5)

**CONCLUSION**

The information, education and communication (IEC) programs experimentally tried by our team had significant impact on the respondent truck drivers in terms of increasing their knowledge of HIV/AIDS. The study suggests that the current low level of knowledge among them of HIV/AIDS may be partly due to lack of understanding and their being unaware of the problem and its gravity. Their knowledge can be increased by means of suitable educational programs. A good counseling program would help them to understand the dangers of HIV/AIDS, its mode of transmission, and also how to prevent it by the proper precautions. Those who are satisfied with this program and benefited by it have even become extensive advocates for HIV/AIDS education. They are likely try to bring about changes for the better in the sexual behavior of their friends.

Other countries of the world, developing and developed ones alike, wherever the HIV/AIDS infection is prevalent, would do well to conduct similar studies and devise suitable Strategies, to arrest the menace. The success of present study was possible because of our appropriate mix of four interventions, namely films, group discussions; folk media and counseling, which together reinforced knowledge and gave credibility for the socially backward drivers for a learning situation. Any one of the interventions, however powerful in itself, could not have achieved the significant success that the combination of the four could achieve. Thus, this study demonstrates how an intelligent and successful combination of educational strategies can make a decisive impact on people and bring about a behavioral change. These educational programs must be ensured by proper supply of condoms through different channels which must be readily available to the stake holders.

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