

# Mandatory HIV Testing: An Indian Perspective

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## Abstract

**Background:** HIV infection has been the most significant disease to affect the mankind during the last two decades. More than half of all new HIV infections occur among young adults. A decade back HIV/AIDS was the leading cause of death among young adults in the developing countries as well as in the developed countries.

**Materials and Methods:** A descriptive survey was conducted among 434 participants representing college students of Udupi district, Karnataka. Stratified random sampling technique was used to select the participants across the district. A structured self-administered tool was adapted consisting of a knowledge questionnaire and attitude scale to collect the data. In statistical analyses frequency, percentage, chi-square, and Pearson correlation were used.

**Results:** Majority (56%) of the participants were below 20 years of age. Television was found to be the main source of information (61.8%) regarding HIV infection. Most (71.4%) of the participants had good knowledge regarding HIV infection. About 83.9% of the participants had favorable attitude towards mandatory premarital HIV testing. The knowledge scores were found to be positively correlated with the attitude of the participants towards mandatory premarital HIV testing.

**Conclusion:** The findings of this study imply thinking towards some public health intervention on HIV counseling and testing and it should be tailored specifically for each population group.

**Keywords:** Udupi, mandatory, premarital, HIV testing, attitude, knowledge, HIV infection

## Introduction

HIV infection has been the most significant disease to affect the mankind during the last two decades. A decade back HIV/AIDS was the leading cause of death among young adults in the developing countries as well as in the developed countries. India has done enormous work to reduce the HIV infection in its highly dense population and the results are applaudable. However, there is a long way to go as we are at third position in the world with highest number of people aged between 15-49 years with HIV infection [1]. Even though billions of dollars are pumped into research, there seems to be no sight of cure or vaccine against this deadly disease. The 2017 report by National AIDS Control Organization (NACO) of India revealed that the HIV infections are steadily declining

in India, but Karnataka has its prevalence rate (0.47%) higher than the national prevalence rate of 0.22% [2]. Although the global prevalence among youth is at 0.8%, there has been an increase in people living with HIV infection from 32.4 million to 36.9 million. The reason for this rise is the number of continuing new HIV infections and people with HIV infection living longer lifespan due to HIV treatment. Worldwide, young people account for a third of new HIV infections [3] the situation is much of the same in India where young people aged between 10 to 24 years account for 31% of the disease burden [4].

The 90-90-90 target of UNAIDS states that by 2020, 90% of people living with HIV know their status, 90% who know their status are receiving antiretroviral treatment and 90% of people on treatment have

suppressed viral loads but in reality as of 2017 only 70% of people living with HIV infection are aware of their status [5]. A few years back the Government of India declared its intention to make premarital HIV testing mandatory. The Government of Goa, Karnataka and Andhra Pradesh also planned to make pre-marital HIV testing mandatory. Many individuals welcomed and supported the Government's move while most NGOs and many private individuals opposed it [6]. Mandatory premarital HIV testing requires testing of HIV status as a condition to get married either at religious places or to legally register the marriage. This practice was originated in United States and has also been seen in some of the countries of African continent. People both from religious background as well as from general population supported this practice when the HIV infection was rampant. Though the present scenario depicts a declining trend in the HIV infections, the opinion regarding mandatory premarital HIV testing remains a debatable topic. There are a few studies around the globe which show that people, specially youth prefer mandatory screening [7] whereas on the other end there are reasons which are against mandatory premarital HIV testing such as low rates of marriage registration in India; fear of stigma and discrimination if the result is positive; false positive result and window period which are limitations of the HIV test itself; it may not motivate people to change unsafe behavior [8]. A qualitative research from Malaysia found that fear of social stigma, discrimination, lack of support system and lack of public understanding were major concerns towards mandatory HIV screening [9]. The above-mentioned reasons seemed to be fair enough for deciding against mandatory premarital HIV testing and instead making it a voluntary exercise, but is the same opinion held by general population more importantly the youth. Therefore, the researchers decided to conduct a survey to identify the level of knowledge regarding

HIV infection and determine the attitude towards mandatory premarital HIV testing among the youth of Udupi district, Karnataka.

## Material and Methods

Descriptive survey design was employed for the study. The population selected for this study consisted of participants enrolled in First Grade degree colleges of Udupi district, Karnataka, India. These colleges impart undergraduate course in basic streams of education like Science, Arts and Commerce. Both private and public-sector institutions were included in the study. Students studying in degree colleges are usually in the age group of 18-21 years of age. The sample size calculation was based on previous study proportion of knowledge (64%) regarding HIV infection [10], therefore the sample size was 434 participants. Stratified random sampling technique was used to select the participants. A structured self-administered tool was adapted. It consisted of: Tool I: Demographic proforma, Tool II: Knowledge questionnaire - it had 34 items regarding general information on HIV and Tool III: Attitude 5-point likert scale with 14 items. Informed consent was taken from the participants of the study and confidentiality of the information was assured.

## Result

In this study, 55% of the participants were females, and 56% were 19-20 years of age.

This study found that majority (61.8%) of the students obtained information regarding HIV infection from television, whereas only 12.4% obtained the information from parents as depicted in Figure 1.

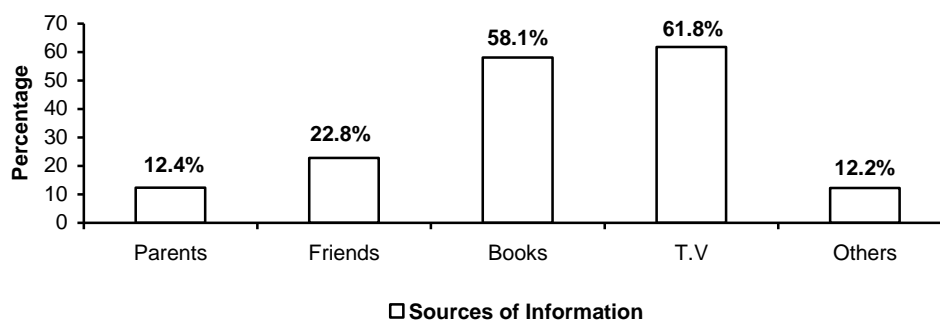


Fig. 1: Description of sample characteristics based on source of information regarding HIV infection.

Around 71.4% of the students had good knowledge regarding HIV infection whereas majority (83.9%) of the students had favorable attitude towards mandatory premarital HIV testing.

A positive correlation between the knowledge score regarding HIV infection and attitude towards mandatory premarital HIV testing was detected in this study as shown in Table 1.

**Table 1: Relationship between knowledge regarding HIV infection and attitude towards mandatory premarital HIV testing n = 434**

Variables	Mean	Std. Deviation	'r' value	p value
Knowledge	24.06	3.695	0.256	0.001
Attitude	47.37	5.884		

\*p < 0.05

## Discussion

Astonishingly, 83% of the participants had favorable attitude towards mandatory premarital HIV testing. This acceptance for mandatory premarital testing is commonly seen through various research studies. A population-based study among 1,406 respondents in South Africa found that over 90% of respondents were willing to accept pre-marital HIV testing [11]. Another questionnaire-based survey done in Gujarat, India among 771 volunteers, showed that 92% of the respondents believed, premarital HIV testing should be made mandatory, rather than matching horoscope and caste [12]. Though majority among general population favor for mandatory premarital HIV testing, such a measure would be less effective when compared to its cost-benefit ratio and the ethical considerations related to stigma and discrimination. The researchers of this study would rather support behavioral changes, awareness programs and counselling for reduction of disease burden in the population. These methods have been found to be effective in reducing the disease burden by half in India and awareness programs should be conducted to influence the opinion towards voluntary testing and reducing high risk behavior instead of having mandatory testing.

The present study also found that television (68.1%) was the most common source of information in contrast to that of parents (12.4%) as a source of information. Several studies across the globe reveal that adolescent and youth get information regarding HIV/AIDS through varied sources, but very few of them get information from parents or medical professionals. A cross sectional survey done in Cameroon showed that majority (66.4%) obtained information through sex education at school and only 6% got information from parents [13]. Another cross-sectional study from Mysore, Karnataka also indicated that only 12.6% got

information from parents [14]. This clearly indicates that in Indian society, parents are still reluctant to talk to their children about HIV infection. This may be due to two factors, that either the parents have less knowledge or are hesitant to discuss about sex education which may crop up during the discussion of HIV/AIDS. Whatever may be the reason, children or youth have the right to reliable information for a safe and healthy future.

It was also found that 71.40% of the participants had good knowledge regarding various aspects of HIV infection. A descriptive survey among 1000 adolescents in Puducherry, India showed that only 2.3% had adequate knowledge [15]. These contrary findings indicate that there are substantial lacunae in the awareness regarding HIV infection and it must be filled through collective efforts from parents at home, teachers at schools and medical professionals in the community at large.

## Conclusion

The findings of this study imply thinking towards some public health intervention on HIV counseling and testing which could be tailored specifically for each population group without hindering the basic human and ethical rights of an individual. STROBE guidelines help to give complete and accurate report of observational studies [16] and hence they were used to report the findings of this study.

## Conflict of Interest

The authors hereby declare that there is no conflict of interest.

## Source of Funding

Nil

## Ethical Clearance

The study received clearance from the Institutional Ethical Committee.

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