



“A Study to Assess the Effectiveness of Information Booklet Regarding HIV Infection and Its Management on Knowledge among Eligible Couples in Selected Urban Area.”

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KEYWORDS

Assess, Effectiveness, Information Booklet, HIV Infection and Its Management on Knowledge, Eligible Couples.

ABSTRACT:

Background: Infection with the Human Immunodeficiency Virus (HIV) is a serious public health issue in India, especially in urban areas.

Aim: To assess the effectiveness of the information booklet regarding HIV infection and its management on knowledge among eligible couples in the selected urban area.

Methods: The research approach adopted for this study is quantitative. The research design used for this research is a quasi-experimental pretest-post-test design. The independent variable in this study was an information booklet regarding HIV infection and its management. The dependent variable in this study was knowledge among eligible couples regarding HIV infection and its management. The setting of the study was an urban area. The sample size for this study was 200. A convenient sampling technique was adopted. Tools and Techniques: Section A: Demographic data, Section B: Questionnaire to assess knowledge of eligible couples regarding HIV infection and its management.

Results: Results showed that the average knowledge score in the pretest was 10.8, which increased to 25 in the post-test. T-value for this test was 39.1. The corresponding p-value was small (less than 0.05), and the null hypothesis was rejected. The average knowledge score in the post-test was significantly higher than that in the pretest.

Conclusion: It concluded that an improvement in the knowledge among eligible couples regarding HIV infection and its management

1. Introduction

A major worldwide health concern, HIV infection targets the body's immune system, particularly the CD4 cells (T cells), which aid the immune system in fending off infections. Needles, unprotected sexual contact, sharing contaminated syringes, mother-to-child transmission during pregnancy, childbirth, or breastfeeding, and receiving blood transfusions from an infected donor are the main ways that HIV, a retrovirus, is spread.¹

The Indian government did not create the National AIDS Control Program (NACP) until 1987 due to the

sluggish first reaction to the disease. Maharashtra, Karnataka, and Andhra Pradesh were among the Indian states where HIV had spread by the early 1990s. High-risk behaviours, including sharing syringes and needles and unprotected intercourse, were major contributors to the epidemic.²

The National AIDS Control Organisation (NACO) of the Indian Health Ministry revealed its estimate of the country's adult HIV prevalence in July 2007 after gathering data in 2006. Between 2 million and 3.1 million persons are thought to be infected with HIV. These numbers are much lower than the NACO estimate



from the previous year, which placed the prevalence at 0.9 per cent and the number of HIV cases at 5.2 million.³

In metropolitan areas of India, HIV infection among eligible couples remains a significant public health concern. With approximately 2.3 million individuals living with HIV, India ranks as the third-largest HIV-infected population globally. In the country, the HIV epidemic is characterised as a "concentrated epidemic," exhibiting high prevalence rates among high-risk groups such as injectable drug users, males who have sexual relations with men, and female sex workers. India's HIV/AIDS epidemic significantly hampers social, economic, and health progress, particularly for eligible urban couples⁴

Tanu Dipta Halder et al. conducted a cross-sectional study in November 2024 to assess HIV knowledge and practices among truck drivers in Basirhat Health District, West Bengal. The study involved 111 truck drivers selected through simple random sampling from parking lots and Dhabas. Face-to-face interviews with a structured questionnaire were used for data collection. Results showed that while half of the drivers had good HIV knowledge, many had misconceptions, such as believing mosquitoes could spread HIV. Most lacked understanding of AIDS symptoms and prevention, and 88.29% had never been tested for HIV, citing various reasons.⁵

Muanza Reyaz and Rahul Shil conducted a pre-experimental study on December 18, 2023, to assess HIV/AIDS knowledge and prevention awareness among high school students in Anantnag, Jammu and Kashmir, India. The study involved 60 students, using a 30-item knowledge survey and demographic data. Results showed that 76.66% of students had insufficient awareness about HIV/AIDS, while only 23.33% had moderate knowledge. The paired t-test revealed a significant improvement in knowledge ($p < 0.0001$). Additionally, correlations were found between gender, family type, parental education, and occupation with students' awareness levels.⁶

Tulsa Sunar conducted a descriptive study in July 2024 to assess nursing students' knowledge, attitudes, and willingness regarding HIV/AIDS patient care at the Nepalgunj Nursing Campus in Banke. Using a simple random sampling method, 54 female PCL nursing students participated. Results showed that 63% of

participants had a strong understanding of HIV/AIDS, while 18.5% lacked knowledge. A positive attitude toward caring for HIV/AIDS patients was found in 85.2%, and 88.9% expressed willingness to provide care. Furthermore, 96.3% were ready to accept the responsibilities of HIV care, with 63% willing to care for patients even after potential exposure to HIV.⁷

Infection with the Human Immunodeficiency Virus (HIV) is a serious public health issue in India, especially in urban areas. India has the world's highest HIV-infected population.

It is crucial to evaluate eligible couples' knowledge and awareness of HIV/AIDS to close the knowledge gap about HIV infection and its management in urban settings.

Therefore, evaluating eligible couples' knowledge about HIV infection and its management in urban environments is crucial.

2. Objectives

1. To assess the knowledge of the eligible couple regarding HIV infection and its management.
2. To evaluate the effectiveness of the information booklet on the knowledge of eligible couples regarding HIV infection and its management.
3. To find out the association between knowledge regarding HIV infection and its management with selected demographic variables of eligible couples.

Methods:

Research approach: The research approach adopted for this study was quantitative.

Research design: The research design used for this research was a quasi-experimental pretest-post-test design.

Variables

Independent Variable: The independent variable in this study was an information booklet regarding HIV infection and its management.

Dependent Variable: The dependent variable in this study was knowledge among eligible couples regarding HIV infection and its management

Setting of the study: Urban area.

Sample size: The sample size for this study was 200.



Sampling Technique: Convenient sampling technique.

Inclusion criteria

- who are willing and able to participate.
- who are available at the time of data collection.

Exclusion criteria

- An eligible couple that refuses to participate in the study.
- who belongs to the healthcare field.

Tools and Techniques

- **Section A:** Demographic data.
- **Section B:** Questionnaire to assess knowledge of eligible couples regarding HIV infection and its management.
- **Scoring:** 1 mark per correct answer; total score categorised as: Poor (0 to 10), Average (11 to 20), Good (21 to 30),

4. Results

Section I: Table 1: Description of samples (eligible couples) based on their personal characteristics in terms of frequency and percentage. N=200

Demographic variable	Freq	%
Age		
21-25 years	144	72.0%
26-30 years	54	27.0%
31-35 years	2	1.0%
Gender		
Male	54	27.0%
Female	146	73.0%
Educational qualification		
Below 10th standard	35	17.5%
10th standard to 12th standard	84	42.0%
Graduate and above	68	34.0%
Other	13	6.5%
Occupation		
Employed	89	44.5%
Unemployed	26	13.0%

Student	48	24.0%
Other	37	18.5%
Monthly family income		
Less than ₹10,000	34	17.0%
₹10,000- ₹20,000	72	36.0%
₹20,000- ₹30,000	64	32.0%
More than ₹30,000	30	15.0%
How long you have been married?		
1-2 years	151	75.5%
2-3 years	48	24.0%
3-4 years	0	0.0%
More than 4 years	1	0.5%

Table No. 1 indicated that 72% of the samples had an age of 21-25 years, 73% of them were females, 42% of them had an education of 10th to 12th standard, 44.5% of them were employed, 36% of them had a monthly family income of Rs. 10000-20000, and 75.5% of them were married.

Section II: Knowledge of eligible couples regarding HIV infection and its management.

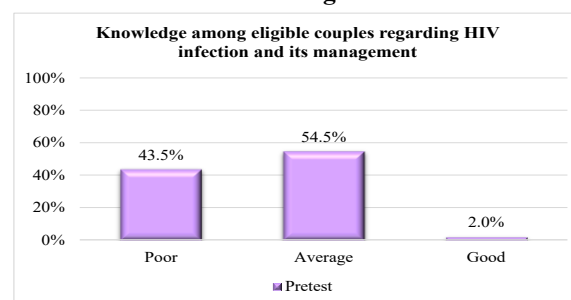


Figure 1: Knowledge of eligible couples regarding HIV infection and its management.

Figure 1 showed that 43.5% of the eligible couples had poor knowledge, 54.5% of them had average knowledge, and 2% of them had good knowledge regarding HIV infection and its management.



Section II: Effectiveness of information booklet on knowledge of eligible couples regarding HIV infection and its management N=200

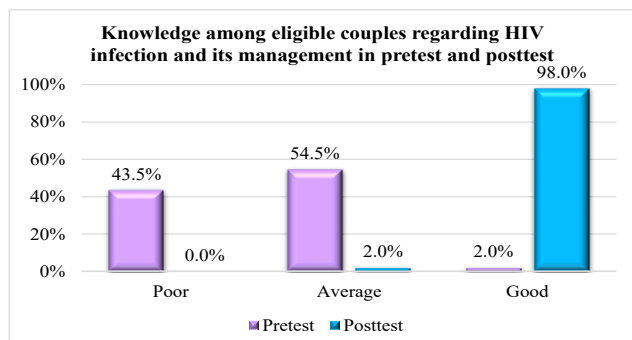


Figure 2: Effectiveness of the information booklet on knowledge of eligible couples regarding HIV infection and its management

Figure 2 showed that in the pretest, 42.5% of the eligible couples had poor knowledge, 54.5% of them had average knowledge, and 2% of them had good knowledge regarding HIV infection and its management. In the posttest, 2% of them had average knowledge, and 98% of them had good knowledge regarding HIV infection and its management. This indicates that there is a remarkable improvement in the knowledge among eligible couples regarding HIV infection and its management.

Table 2: Paired t-test for the effectiveness of the information booklet on knowledge of eligible couples regarding HIV infection and its management. N=200

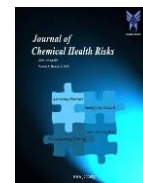
	Mean	SD	T	Df	P-value
Pretest	10.8	4.7	39.1	199	0.000
Post-test	25.0	2.0			

Table 2 showed that the average knowledge score in the pretest was 10.8, which increased to 25 in the post-test. T-value for this test was 39.1. The corresponding p-value was small (less than 0.05), and the null hypothesis was rejected. The average knowledge score in the post-test was significantly higher than that in the pretest. It is evident that the knowledge among eligible couples significantly improved after the information booklet on HIV infection and its management. The information

booklet is significantly effective in improving the knowledge among the eligible couples regarding HIV infection and its management.

Table 3: Item analysis N=200

Knowledge item	Pretest		Post-test	
	Freq	%	Freq	%
HIV meaning	97	48.5%	192	96.0%
Causes HIV infection	121	60.5%	193	96.5%
HIV spread	63	31.5%	127	63.5%
Symptoms of HIV infection	73	36.5%	168	84.0%
HIV can be transmitted through which body fluids	94	47.0%	138	69.0%
How is HIV diagnosed	24	12.0%	196	98.0%
HIV can be transmitted from a mother to her baby	94	47.0%	179	89.5%
How can partners avoid having it?	66	33.0%	173	86.5%
HIV infection through other means can be prevented	29	14.5%	200	100.0%
Window period for HIV testing	41	20.5%	183	91.5%
Days after the window period, should you get tested for HIV	103	51.5%	170	85.0%



Can HIV infection be cured	64	32.0%	163	81.5%
Importance of disclosing HIV status to sexual partners	20	10.0%	193	96.5%
Can mosquito bites cause HIV infection?	85	42.5%	160	80.0%
The HIV viral load test measures	88	44.0%	186	93.0%
Purpose of regular CD4 count monitoring	107	53.5%	168	84.0%
Importance of early HIV diagnosis and treatment	54	27.0%	147	73.5%
What should people with HIV avoid to protect their health?	86	43.0%	171	85.5%
Is it safe for HIV-positive individuals to have children?	48	24.0%	155	77.5%
What is antiretroviral therapy (ART)?	111	55.5%	160	80.0%
Treatments available for HIV	76	38.0%	166	83.0%
Anti-virus drugs work	52	26.0%	11	5.5%

Management of HIV infection	49	24.5%	169	84.5%
Benefits of HIV testing	57	28.5%	158	79.0%
Can HIV-infected people live normal lives	69	34.5%	176	88.0%
Services are needed for people living with HIV	53	26.5%	180	90.0%
What diet should HIV-related individuals eat	66	33.0%	168	84.0%
Role of nutrition in HIV management	63	31.5%	168	84.0%
Can HIV-infected people breastfeed their babies	75	37.5%	182	91.0%
HIV-positive couples can have healthy relationships	138	69.0%	191	95.5%

Section IV: Table 4: Fisher’s exact test for the association between knowledge scores regarding HIV infection and its management with selected demographic variables of eligible couples.

Demographic variable		Knowledge			p-value
		Poor	Average	Good	
Age	21-25 years	64	80	0	0.022
	26-30 years	22	28	4	



	31-35 years	1	1	0	
Gender	Male	31	22	1	0.043
	Female	56	87	3	
Educational qualification	Below 10th standard	18	17	0	0.008
	10th standard to 12th standard	40	44	0	
	Graduate and above	28	38	2	
	Other	1	10	2	
Occupation	Employed	27	59	3	0.016
	Unemployed	15	11	0	
	Student	28	19	1	
	Other	17	20	0	
Monthly family income	Less than ₹10,000	11	23	0	0.000
	₹10,000-₹20,000	36	36	0	
	₹20,000-₹30,000	34	30	0	
	More than ₹30,000	6	20	4	
How long have you been married?	1-2 years	58	89	4	0.055
	2-3 years	28	20	0	
	More than 4 years	1	0	0	

Table No. 4. Since p-values corresponding to age, gender, education, occupation, and monthly family income were small (less than 0.05), the demographic variables age, gender, education, occupation and monthly family income were found to have a significant association with the knowledge among eligible couples regarding HIV infection and its management.

5. Discussion

A cross-sectional study was conducted by Apurva Ratnu in 2013 to assess HIV/AIDS knowledge among 400 pregnant women in Belagavi, Karnataka. Most participants (95%) were aged 19-29, with 56% identifying as Muslim and 43% having secondary education. While 100% had heard of HIV/AIDS, misconceptions persisted, with some women mistakenly believing it could be transmitted through food, mosquito bites, or handshakes. Key sources of information were health workers (53%), and knowledge about transmission modes was high (e.g., unprotected sex, blood transfusions, and mother-to-child). However, awareness of HIV testing services like ICTC and PPTCT was limited. The study results highlight the need for improved targeted education to address misconceptions.⁸

CONCLUSION: The study concluded that the knowledge among eligible couples significantly improved after the information booklet on HIV infection and its management. The information booklet is significantly effective in improving the knowledge among the eligible couples regarding HIV infection and its management.

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