सत्यमेव जयते

RESEARCH COMPENDIUM

VOLUME I

FROM RESEARCH STUDIES UNDERTAKEN BY STATE AIDS CONTROL SOCIETIES IN FY 2021-22

PEPFAR
USAID
FROM THE AMERICAN PEOPLE
NACO
National AIDS Control Organisation
India's response to HIV & Sexually Transmitted Infections
Ministry of Health & Family Welfare, Government of India
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FOREWORD

India's NACP has demonstrated a comprehensive and proactive approach to addressing the HIV epidemic by integrating research, evaluation, and knowledge dissemination into its core strategy. This approach has played a significant role in the country's success in halting and reversing the spread of HIV.

To address the evolving needs of the programme, the NACP has established a strong institutional system called the Network of Indian Institutions for HIV/AIDS Research (NIIHAR) for HIV research and evaluation which encompasses various research institutes and organizations, which are tasked with conducting epidemiological, socio-behavioral, operational, clinical research, and evaluations.

The research studies under NACP help to identify gaps and needs in the programme and ensure that new evidence generated provides localized solutions for these gaps.

NACO actively compiles and consolidates the key findings and programmatic recommendations of the various research studies, projects & innovations to create an evidence base that can be widely disseminated for continuous learning and improvement. The Research Compendium serves as an important step in sharing valuable research outcomes and facilitating data-driven decision-making and evidence-based policy formulation in India's strong response to HIV/AIDS. It represents a commitment to transparency and knowledge dissemination, ultimately contributing to the betterment of those affected by HIV/AIDS in the country.

The Research Compendium includes the key findings and recommendations of various research studies conducted between 2021 and 2022. The aim of this compendium is to make information accessible to a wider audience, including scientific communities, policy makers, and all those working towards the welfare of People living with HIV (PLHIV) and communities.

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अपनी एचआईवी अवस्था जानें, निकटतम सरकारी अस्पताल में मुफ्त सलाह व जाँच पाएँ

Know you HIV status, go to the nearest Government Hospital for free Voluntary Counselling and Testing

निधि केसरवानी, भा.प्र.से.
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PREFACE

Research & Evaluation is a vital component of Strategic Information Management under the National AIDS Control Programme (NACP) which focuses on ensuring translation of research outputs into programmatic action and policy formulation to address the multifaceted challenges posed by the epidemic and tailoring interventions to specific needs.

Under NACP, NACO has established a research agenda that includes partnerships and networking with stakeholders, capacity building for HIV/AIDS research, and commissioning research on key programmatic priorities & issues. NACO has also set up a research consortium called NIIHAR to promote collaboration, training, and capacity building among research institutions involved in HIV/AIDS research. This initiative helps strengthen the research ecosystem in India and fosters collaboration among institutions across the country. In addition to encouraging research, NACO also conducts assessments to evaluate the impact of various HIV/AIDS programmes which helps identify problem areas that require attention and adjustments to improve programme effectiveness.

NACP's focus is not limited to conducting research but also on ensuring that the research outputs are effectively translated into programmatic action and policy formulation. This emphasis on practical application helps in making evidence-based decisions in the areas of policy, management, and intervention evaluation.

The Research Compendium is an evidence base with consolidated information from various studies, projects, and innovations in HIV/AIDS for larger dissemination of research findings and programmatic recommendations for wider circulation.

The compilation of the key findings and recommendations from the research studies conducted during 2021-22 in the form of the Research Compendium is expected to benefit a broad range of stakeholders and contribute to provide valuable inputs to various stakeholders, including policy makers, healthcare professionals, and the wider community, ultimately advancing the fight against HIV/AIDS in India.

Nidhi

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India's approach to combating HIV/AIDS through evidence-based policymaking and research is a valuable example of how a comprehensive, data-driven strategy can lead to significant progress in public health. National AIDS Control Programme has compiled key findings and programmatic recommendations of operational research studies conducted by State AIDS Control Societies during 2021 to 2022 in the 'Research Compendium Volume-I'. This would support policies and initiatives based on scientific evidence, ultimately leading to more efficient and targeted interventions in the battle against HIV/AIDS.

National AIDS Control Programme acknowledges that the process of evidence generation and innovation through scientific research is rigorous and requires expertise in the field, as well as collaboration between Institutes. NACO extends its heartfelt appreciation to all State AIDS Control Societies (SACS), Researchers, Scientists, and Programme Managers and colleagues who have dedicated their hard work to make research activities under the NACP a resounding success. We acknowledge the technical support provided by all members of the Research Abstract Committee, officers of Strategic Information division at National & State level, as well as contribution of USAID through Johns Hopkins University, & YRGCARE under project ACCELERATE in designing and printing of the Research Compendium Volume-I.

This commitment of Research & Evaluation has positioned NACO as a pioneer in evidence generation and dissemination for decision-making and policy formulation through scientific research, serving as a model for other similar public health programmes.

(Dr. Chinmoyee Das)

CONTENTS

LIST OF ABBREVIATIONS

AEP	Adolescence Education Programme
AFHS	Adolescent Friendly Health Services
AIDS	Acquired Immuno-Deficiency Syndrome
ANC	Antenatal Clinics
ART	Anti-Retroviral Treatment
ARTC	Anti-Retroviral Treatment Centre
BCC	Behaviour Change Communication
CBO	Community-Based Organisation
CHTC	Couples HIV Testing and Counseling
CSC	Common Service Centres
DAPCU	District AIDS Prevention and Control Unit
FGD	Focused Group Discussion
FIDU	Female Injecting Drug Users
FSW	Female Sex Worker
HIV	Human Immunodeficiency Virus
HIVST	Human Immunodeficiency Virus Self-Testing
HRG	High Risk Group
HSB	Health-Seeking Behaviour
ICTC	Integrated Counseling & Testing Center
IDI	In-Depth Interview
IDU	Injected Drug User
IEC	Information, Education and Communication
IEC	Institutional Ethics Committee
IPA	Interpretative Phenomenological Analysis
IV	Intra-Venous
KP	Key Population
KSACS	Kerala State AIDS Control Society
KSAPS	Karnatak State AIDS Prevention & Control Society
LFU	Loss to Follow-Up
MSACS	Mizoram State AIDS Control Society
MSM	Men who have Sex with Men
NACO	National AIDS Control Organisation
NACP	National AIDS Control Programme
NGO	Non-Government Organisation
ORW	Out-Reach Worker
OST	Opioid Substitution Therapy
PLHIV	People Living with Human Immunodeficiency Virus
PPP	Public Private Partnership
PPTCT	Prevention of Parent to Child Transmission
PrEP	Pre-Exposure Prophylaxis
PWID	People Who Inject Drugs
QoL	Quality of Life
RMCAS	Revised Multidimensional Condom Attitude Scale
RRC	Red Ribbon Club
RSP	Regular Sexual Partner
SACS	State AIDS Control Society
SCERT	State Council for Educational Research and Training
SCM	Syndromic Case Management
SDG	Sustainable Developmental Goal
SDSB	Sustained Desirable Sexual Health Behaviour
SHSRC-K	State Health Systems Resource Centre-Kerala
SMCR	Sender Message Channel Receiver
SPS	Social Protection Schemes
STI	Sexually Transmitted Infection
TANSACS	Tamil Nadu State AIDS Control Society
TG	Transgender
TI	Targeted Intervention
TLD	Tenofovir, Lamivudine, and Dolutegravir
TT	Testing Together
WHS-CDC	Voluntary Health Services – Centers for Disease Control and Prevention
WLHIV	Women Living with HIV

OVERVIEW

India's effective response to the HIV/AIDS epidemic is, in part, attributed to its adept development and utilization of an evidence-based approach for shaping crucial policy and programme decisions. Over the past three decades, the process of evidence generation and programme planning has evolved, moving from the national level to the state, district, and even sub-district levels. This evolution has enabled India to focus its efforts on the most pertinent geographical areas and populations, allowing for a more refined and adaptable response as the epidemic has evolved. With the emergence of new infection hotspots across the country, it is imperative to identify these emerging areas to strengthen the use of evidence for informed decision-making at the district, state, and national levels.

Research & Evaluation is a critical element of Strategic Information Management within the National AIDS Control Programme which encompasses a wide range of areas, including epidemiological, social, behavioral, clinical, and operational research, each playing a significant role in guiding programme strategies and policies. NACO has placed a strong emphasis on strengthening research activities under the programme, with the aim of positioning NACO as the leading national body for promoting and coordinating HIV/AIDS research both nationally and in the South Asia region. This involves developing guidelines, norms, and standards for conducting HIV/AIDS research, establishing partnerships and networks with various stakeholders and reputable national academic and research institutions, supporting capacity building in HIV/AIDS research, and ensuring the translation of research findings into programmatic action and policy formulation.

Under NACP, to address the programme's evidence and research needs and make the best use of available data, a structured Research plan has been established to identify analytical requirements and research priorities. A systematic process is undertaken to pinpoint existing information gaps and evidence requirements in programme planning and implementation, involving programme managers at NACO, SACS, and development partners. A multi-centric approach is adopted for research, involving a panel of epidemiologists, biostatisticians, scientists, researchers, academicians, and public health experts from reputable government institutes. A Research Plan Screening Committee has been formed to evaluate research proposals, which are then subjected to technical and ethical scrutiny under NACO.

In the fiscal year 2021-22, NACO identified state-specific research priorities and conducted 110 research studies with domestic funding, supported by SACS across the country. The evidence derived from these studies was central to understanding gaps in coverage, service utilization for prevention and testing, as well as issues related to linkage loss and adherence in treatment, all with a sharp focus on achieving the ambitious goal of ending AIDS by 2030 in India. These studies provided valuable state-specific information for programme managers and policymakers.

To consolidate the knowledge and evidence generated through these state-specific studies, NACO has decided to publish a compendium featuring key findings and recommendations from its supported research studies. This compendium aims to establish an evidence base and disseminate findings and recommendations to a wider audience, including scientific communities, policymakers, people living with HIV, and marginalized communities. The compendium includes findings and recommendations from 70 abstracts selected from various research studies conducted between 2021 and 2022.

INFORMATION, EDUCATION, COMMUNICATION AND YOUTH

A Communication Needs Assessment for People Living with HIV in Arunachal Pradesh

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INTRODUCTION

Communicable diseases are illnesses that occur due to the presence of some specific infectious agents that transmit from one infected living organism to another. The pathogen may transmit either directly or indirectly through an intermediate plant or animal host, vector, or from the inanimate environment.[1] One such communicable pathogen, the Human Immunodeficiency Virus (HIV) is a virus that attacks the body's immune system. The usual symptoms include fever, chills, rash, night sweats, myalgia, sore throat, fatigue, swollen lymph nodes, mouth ulcers etc.

Approximately 37.7 million people across the world were living with HIV in 2020 out of which, 53% i.e., more than half were women and girls.[3] The estimated number of people living with HIV in India was 2.32 million in 2020.[4] The first case of HIV in Arunachal Pradesh was detected in 1998. HIV continues to remain a serious public health challenge in the Northeast, including Arunachal Pradesh.[6] The major risk factors of HIV are unprotected sex, drug abuse, blood and blood products transfusion.

With there being no cure for HIV virus, the effective management of HIV and HIV awareness among the masses is key in early detection and combating the spread of the virus.

To effectively manage HIV epidemic in the state with the specific tribal community, it is imperative to conduct a needs assessment for individuals living with HIV to have a better insights about their health status, to identifying their requirements and understanding the challenges associated with the epidemic. Hence, a communication needs assessment for people living with HIV is of utmost importance in the context of Arunachal Pradesh. Lastly, as HIV is a lifelong entity for PLHIVs with no cure, its spread can be prevented and controlled via dissemination of proper knowledge among the masses. The aim of this study was to assess the communication needs for HIV in Arunachal Pradesh. The study objectives are as follows:

To describe the demographic characteristics of PLHIV and KP in Arunachal Pradesh.

To identify the communication needs/preferences of key populations for HIV services in Arunachal Pradesh.

To determine the prevalence of awareness of HIV amongst the key population of HIV in Arunachal Pradesh.

METHODS

In this cross-sectional study, Papum Pare district was selected which has the highest number of reported HIV positive cases. In 2021, around 476 cases of HIV were registered in Arunachal Pradesh out of which 299 (62.8%) were from Papum Pare district alone in the state. All HIV positive cases of the selected districts were included in the study. Individuals who did not give consent and not resided in the selected district at the time of study were excluded from the study. An individual was contacted thrice and if after the 3rd attempt, they could not be contacted, the study subjects were excluded.

Around 80 HIV positive cases of Papum Pare district satisfied the inclusion and exclusion criteria and were included in the study. Since, out of the total HIV cases only 80 PLHIV cases could be traced therefore the ratio of PLHIVs and key populations was decided to be 1:4. The calculated key population was 320.Considering a 6% non-respond rate of KPs, a total of 340 KPs (209 FSWs, 61 MSMs and 70 IDUs) were included in the study. The participants were selected using snowball sampling technique.

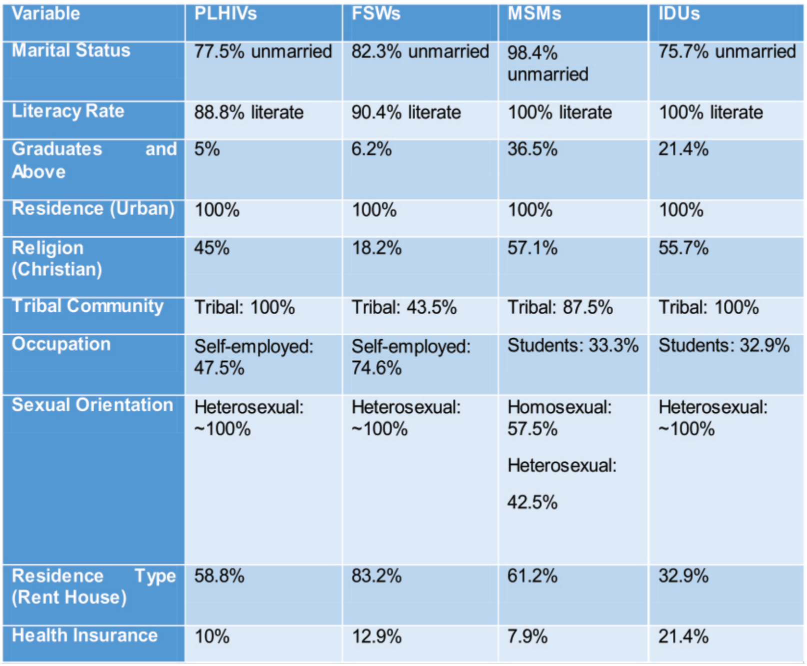
For this study, a combination of primary and secondary data was gathered. Primary data was collected through individual interviews, and secondary data was sourced from SACS. Statistical analysis was carried out using SPSS version 16.

FINDINGS

The study included a total of 80 PLHIVs, comprising 59 males and 21 females, along with 340 key population individuals included 209 FSWs, 61 MSMs, and 70 IDUs. The highest proportion of PLHIVs (77.5%) were aged between 18-28 years, followed by 29-38 years (22.5%). A similar age distribution was observed among all key populations. The median age was 24.5 years for PLHIVs, 23 years for IDUs, and 24 years for both FSWs and MSMs.

The table 1 provides a comprehensive overview of key demographic and social characteristics of the various study participant groups, inclusive of PLHIV, FSW, MSM, and IDUs. These characteristics encompass marital status, education levels, residence, religious affiliations, tribal community identification, occupation, sexual orientation, housing arrangements, and health insurance coverage. Prep guidelines, technical briefs, previous research compendiums.

Table 1: Demographic and Social Characteristics of Study Participant



Variable	PLHIVs	FSWs	MSMs	IDUs
Marital Status	77.5% unmarried	82.3% unmarried	98.4% unmarried	75.7% unmarried
Literacy Rate	88.8% literate	90.4% literate	100% literate	100% literate
Graduates and Above	5%	6.2%	36.5%	21.4%
Residence (Urban)	100%	100%	100%	100%
Religion (Christian)	45%	18.2%	57.1%	55.7%
Tribal Community	Tribal: 100%	Tribal: 43.5%	Tribal: 87.5%	Tribal: 100%
Occupation	Self-employed: 47.5%	Self-employed: 74.6%	Students: 33.3%	Students: 32.9%
Sexual Orientation	Heterosexual: ~100%	Heterosexual: ~100%	Homosexual: 57.5% Heterosexual: 42.5%	Heterosexual: ~100%
Residence Type (Rent House)	58.8%	83.2%	61.2%	32.9%
Health Insurance	10%	12.9%	7.9%	21.4%

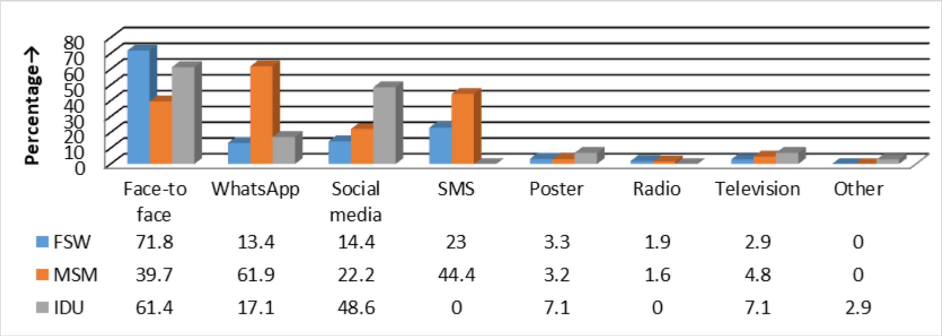
Of total HIV positive, only 25% participants received treatment for HIV. Around, 22.5% of HIV positive participants were not aware about the availability of the case managers in the study area. Around 71.2% HIV positive participants were sexually active, however, 80% of the sex partners are unaware of their HIV status and only 28.8% use condoms.

Out of total 80 HIV positive, only 47.5% communicate with health care provider and around 45% preferred face to face channels of communication. Among Key Populations, MSM (68.3%) were better equipped with the knowledge of the signs and symptoms of HIV as compared to FSW (54.5%) and IDU (51.4%). Among KPs, 72.2%FSW, 96.8% MSM and 95.7% IDUs knew that HIV is transmissible; however, among IDUs, 42.9% believed that HIV can spread through mosquitos' bites.

None of KPs had knowledge about PrEP; however, most of them (88% FSWs, 87.1% IDUs & 95.2% MSMs) were willing to receive messages about PrEP services in the future. All IDUs were aware about HIVST, whereas, among MSM, only 50% were aware about HIVST. Among FSW, none were aware about HIVST.

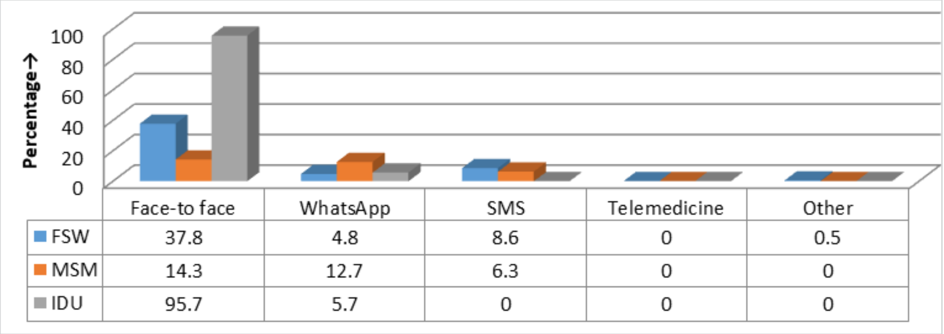
Amongst key populations, all groups had preferred the different channels of communications. The Figures 1-3 presented the details of preferences for communications among key populations.

Fig. 1: Preferred channels to communicate with PEP service among key populations



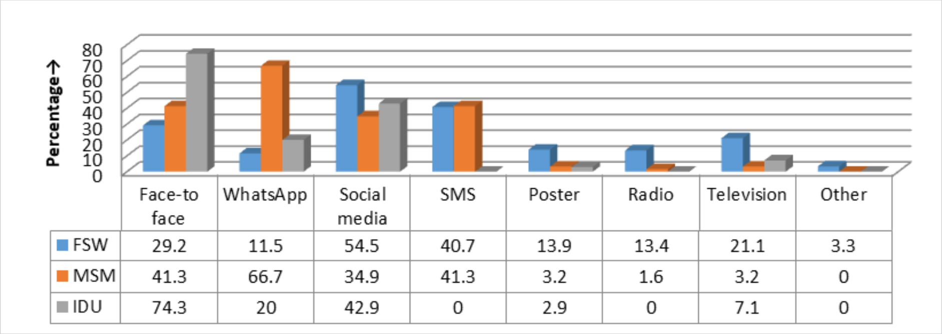
	Face-to face	WhatsApp	Social media	SMS	Poster	Radio	Television	Other
■ FSW	71.8	13.4	14.4	23	3.3	1.9	2.9	0
■ MSM	39.7	61.9	22.2	44.4	3.2	1.6	4.8	0
■ IDU	61.4	17.1	48.6	0	7.1	0	7.1	2.9

Fig. 2: Preferred channels to communicate with healthcare provider among KPs



	Face-to face	WhatsApp	SMS	Telemedicine	Other
■ FSW	37.8	4.8	8.6	0	0.5
■ MSM	14.3	12.7	6.3	0	0
■ IDU	95.7	5.7	0	0	0

Fig. 3: Preferred channels to communicate with HIVST service among KPs



	Face-to face	WhatsApp	Social media	SMS	Poster	Radio	Television	Other
■ FSW	29.2	11.5	54.5	40.7	13.9	13.4	21.1	3.3
■ MSM	41.3	66.7	34.9	41.3	3.2	1.6	3.2	0
■ IDU	74.3	20	42.9	0	2.9	0	7.1	0

CONCLUSIONS

Findings revealed that knowledge about transmissibility of HIV were higher among KPs. Among IDUs, 42.9% believed that HIV can spread through the mosquitoes' bites. Findings also revealed that only 45% HIV positive cases preferred face to face channels of communication. However, amongst key populations preferences for communications varied widely. Most of IDUs preferred face-to face channel of communication, as compared to FSW, and MSM.

RECOMMENDATIONS

There is a necessity to gear up awareness of HIV AIDS among both key populations and PLHIV in Arunachal Pradesh. The awareness programmes should be targeted specifically towards the youth as they make up the largest group of PLHIV and KP. Interactive sessions between health care providers and KP/PLHIV (face-to-face interactions), preferably in private (if feasible), to dispel myths around HIV and correcting their misperceptions and incorrect knowledge regarding various aspects of HIV/AIDS will go a long way in making them realize and accept current interventions regarding prevention and control of HIV AIDS. There might be some lacunae in transfer/dissemination of key messages among the KP and PLHIV resulting in underutilization of condoms by PLHIV and underutilization of HIVST services among KP, which needs to be rectified. Safe sexual practice messages should not only target KP and PLHIV, with the need for greater dissemination to the larger public/non-KP clients to make them aware of HIV/AIDS and increase use of condoms.

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Assessment of Teacher's Knowledge about Adolescent Education Programme in Goa, India

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INTRODUCTION

Adolescence is a very crucial period that determines how a person will view and interact with the world as an adult. However, the current school curriculum of the country makes knowledge on adolescent reproductive health needs inaccessible. The Adolescence Education Programme explains the process of building a strong foundation for sexual health through information acquisition and forming healthy behaviours, beliefs and values about identity, relationships and intimacy [MSACP,2008]. The AEP not only focuses exclusively on reproduction but considers all aspects of life which are related to sexuality and reproductive health related behavior [Thakur& Patnaik, 2018]. Hence imparting valid information and thereafter its assessment in evaluating the knowledge and the attitude becomes imperative. Teachers play a central role during the adolescent phase of every student. They have been imparted great responsibility in identifying the early signs of issues emerging from adolescence. It is hence imperative that school teachers are equipped with knowledge associated with adolescent health and the challenges they face during this period. The present study is aimed at assessment of teachers' knowledge about Adolescent Education Program (AEP).

METHODS

A descriptive survey design and quantitative approach was used to assess knowledge among school teachers about the Adolescent Education Programme (AEP) under NACP. A quantitative approach was used to describe the demographic profile of teachers and to assess effectiveness of AEP training among them. The study was conducted at the State Council for Educational Research and Training (SCERT) Goa during the implementation of AEP training for high school teachers from all 12 talukas of Goa, between Nov 2022-Jan 2023. With a sample size of 418 teachers, the data was collected using structured tools and an open-ended questionnaire. The data was analysed using SPSS.

FINDINGS

Socio-demographic profile

Of total 418 high school teachers, 191 (45.7%) were males and 227(54.3 %) were females. The teachers were aged between 23 to 59 years. Majority (63.9%) of respondents were from rural area and 36.1 % were from urban area. Respondents had teaching experience ranging from 1-33 years and majority (84.7%) were having regular employment. Majority (75.5%) respondents were from aided schools and most (72%) of them belonged to Hindu religion.

2. Pre-& and Post Test Scores

Table-1: Comparison between Pre and Post-test knowledge sores (n=418)

Test	Mean	SD	Degree of Freedom	Level of Significance
Pre-test	24.366	5.741	417	0.001
Post-test	29.078	4.966		

There is a significant difference in Pre and Post-test knowledge scores indicating the effectiveness of AEP.

Evaluation of AEP training

Most of the respondents agreed that the training was relevant, training activities were clearly described, and the learning objectives were met. Moreover, the audio-visual aids and teaching method used was considered appropriate.

Opinion of teachers about AEP

4.1. Relevance

1. The training was relevant, informative, interesting and created awareness about adolescent problems.

2. The resource persons were knowledgeable, and the videos used assisted the learning.

3. The content learnt will help to meet adolescent needs.

4. Overall consensus of wanting half-day training sessions due to overlap of content between sessions.

5. Session can be conducted at the school level for parents.

4.2. Implementation

1. The information received was adequate.

2.Information could be accessed online.

3.Topics covered can be limited.

4. Reading material could be provided.

5. The authorities were cooperative.

4.3. Effectiveness

1. The training has improved the perception and attitude towards adolescent program.

2. The knowledge gained will help in coping and understand the adolescent program.

CONCLUSIONS

The findings showed that the AEP was effective in enhancing knowledge of school teachers. The teachers reported that AEP was relevant, well implemented, and effective, thus will help them to use the knowledge while dealing with adolescent students in the school.

RECOMMENDATIONS

It is of paramount importance that school teachers are equipped with knowledge associated with adolescent health and the challenges they face during this period. The teachers being the person with opportunity to directly observe can be instrumental in influencing adolescent's behavior. This study will significantly contribute to teacher's knowledge in the area of adolescent's health and problems so early intervention and referral can be made to prevent future negative consequences. There are needs to conduct a large mix method study to assess the effectiveness of AEP, and peer mentoring programmes among adolescents. A mechanism needs to develop for periodic review of effectiveness of AEP under NACP.

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Assessment of Adolescent Education Programme in Chandigarh

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INTRODUCTION

Adolescents pose a unique set of HIV/AIDS related reproductive and sexual health issues. Addressing their needs is a challenge for developing newer integral strategies beyond the health sector. An effective implementation of Adolescence Education Programme (AEP) can offer huge potential for creating awareness among adolescents in context to planned parenthood by addressing their reproductive and tend sexual health needs that they encounter in real life. Findings of the present study may be helpful in extending adolescent friendly health services (AFHS) beyond health institutions at the school level through a holistic approach.

OBJECTIVES

Evaluate the programmatic outcomes of AEP achieved including its linkages with other departments.

Examine the knowledge about HIV/AIDS and sexual health behavior among adolescent students.

Explore opinions of students and teachers regarding their needs and difficulties encountered in implementation of AEP in Chandigarh.

METHODS

Cross-sectional survey was conducted among adolescent students from IX to XII standard, and teachers at the selected government schools of Chandigarh. WHO -30 cluster sampling technique was used in selecting a minimum of 14 students (7 boys and 7 girls) and at least one teacher/coordinator from each school with prior permission from Chandigarh Administration, following all Ethical Guidelines with prior approval of Institutional Ethics Committee (IEC). Quantitative data collection tools included interview schedules for students, school teachers and also school survey schedule for evaluation of activities under AEP. Opinions of teachers and students regarding linkages with Adolescent-Friendly Health Services, and barriers faced by them in implementation of AEP activities. Qualitative data collection tools included Focus Group Discussion (FGD) and in-depth interviews.

FINDINGS

Study included 424 adolescent students (211 boys and 213 girls) aged 13-19 years studying in classes IX to XII from Government schools in Chandigarh. Majority of students (94.1%) faced some sort of psychological issue irrespective of socio-demographic characteristics. The most common psychological problem was nervousness (46.9%) and sleeplessness (27.4%). Boredom was also reported by few participants. Prevalence of misuse of substances reported was 11.1% (14.7% boys and 7.5% girls). Only 55.9% boys and 45.5% girls were aware of correct legal age of marriage for boys. Contraceptive awareness was 89.6% with no significant association with gender. Teachers/school curriculum was the commonest source of contraceptive awareness reported by 50.5%. Use of condoms (56.4%) followed by loyalty to one partner (29.7%), were stated as preventive measures for sexually transmitted infections. Engaging in sexual intercourse with opposite sex was reported by 50.5% students as mode of spread of HIV/AIDS followed by sharing needles reported by 45.3% respondents. HIV/AIDS was the most commonly known STI reported by majority (94.3%) students. Awareness of other STIs was comparatively low indicating need of increasing awareness of other sexual transmitted infections among students.

A number of misconceptions regarding mode of spread of HIV were prevalent among students. There were 88.4% students reporting awareness of availability of drop boxes in schools. However, only a small proportion of students could be benefitted to their satisfaction through dropping their problems in drop boxes. Among all, 51.4% students desired sexual education between 14-17 years of age, mostly in schools. Increased self-confidence (54.5%), followed by satisfaction with career planning (38.2%) and social support (24.5%) came out to be the most common perceived benefits of AEP. Acceptability for AEP training was reported by 93.2% teachers. Only 40.9% students reported sexual education by trained teachers in their schools. About 70% teachers reported adolescent friendly health activities in their schools during in the past year. Main barriers for effective implementation of AEP came out to be hesitation of teachers on issues concerning reproduction and sexuality, and communication gaps between teachers, students and parents. Majority of schools were having adequate infrastructure, cleanliness in the consultation area and good physical environment for conducting AEP activities. IEC material for adolescents was available at the time of visit in 93.3% schools. Students accessibility to internet in schools in designated rooms was available only in 33.3% schools. Availability of nodal teachers was found only in 40.0% of schools. Broad spectrums of online/offline AEP activities and number of barriers in performing AEP Activities were observed.

Table-1: Findings

Adolescent health Service	Variable	Percentage
Misconceptions regarding HIV transmission	Sharing food with a person infected with HIV	13.4%
Awareness regarding availability of drop boxes	Aware of availability of drop boxes for dropping personal problems/queries in your school	88.4%
Perception of students regarding right age to impart to sexual education	Right age (14 - 17 years)	51.4%

Benefits perceived by students from Adolescent Education Program	Increased self-confidence	54.5%
Acceptability for AEP training	Do you think it is acceptable for teachers / parents to get training and counsel the students	93.2%
Adolescent Friendly Health Initiatives/Adolescent Friendly Health Services	Were there Adolescent Friendly Health Initiatives/Adolescent Friendly Health Services activities in their schools (online or offline)	70%

CONCLUSIONS

Responses from students and teachers show that AEP has a beneficial effect in educating the youth on a number of reproductive health concerns, with the exception of a few topics. The present study highlights the barriers in seeking services to bridge the existing gaps. There is a need of avoiding misconceptions regarding HIV/AIDS and sexual issues still existing among students. There is a scope of extending adolescent friendly health services at the school level through AEP as teachers and students have the potential to promote adolescent health.

RECOMMENDATIONS

Empowering the schools with an effective AEP may be an effective strategy for adolescent health promotion. Domains of AEP activities should be extended beyond health services in a holistic manner. In schools there should be implementation of integrated health strategies in an adolescent friendly manner. There is an urgent need of continuous evaluations of AEP on regular basis to improve its efficacy and remodelling AEP activities in view of suggestions of stake holders satisfying their felt needs. Parents should also be made part of AEP activities. There is a need of inter-sectorial co-ordination and establishing synergy between Educational, Medical and other Departments for collaboration.

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Perceived Sufficiency and Usefulness of IEC Materials related to HIV/AIDS among Adults aged 18 – 49 years in Kerala – an Explanatory Sequential Mixed Method Study

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INTRODUCTION

According to the recent NFHS-5 data, less than 50% of the adults have comprehensive knowledge on HIV/AIDS. Lack of sufficient IEC materials will probably make the state a high-risk zone in the coming years if appropriate preventive management measures are not taken. Also, KSACS is publishing many IEC materials for the community, but most of them remain unused in offices. This underscores the need to evaluate the community's use of these materials and gauge their knowledge about HIV/AIDS.

OBJECTIVES

Assess the utilization of IEC materials related to HIV/AIDS among adults in Kerala aged 18 to 49 years in terms of acceptability, usefulness and lacunae therein.

Understand the preferred sources of IEC materials on HIV/AIDS.

Assess the knowledge regarding transmission, prevention and management of HIV/AIDS among adults in Kerala.

METHODS

The study adopted a mixed method combining both quantitative and qualitative methods. The study was conducted in six randomly selected districts of Kerala based on HIV-prevalence– Thiruvananthapuram, Pathanamthitta, Ernakulam, Thrissur, Palakkad and Wayanad. The cross-sectional survey was conducted using multi-stage cluster sampling method and qualitative assessment via purposive sampling methods. The sample size for the cross-sectional survey was estimated to be 750 and for the qualitative study, it was 35. The study adopted Berlo's Sender Message Channel Receiver (SMCR) model of communication. It contains four elements: Sender, Message, Channel, and Receiver. The analysis was conducted based on this model. The ethical clearance was obtained from the Institutional Ethics Committee of SHSRC-K. Informed consent was obtained from the study participants before commencing the study. The data was collected by the field investigators by visiting the households of the respondents. The quantitative data was entered in Microsoft excel and analysed using SPSS version 20. The qualitative data collected were transcribed, translated and then analysed manually. Deductive coding was followed, and thematic diagrams were developed.

FINDINGS

Majority of the adults (70 %) had not seen any IEC materials on HIV/AIDS during the last six months; Lack of persuasiveness, diversified focus, poor clarity of messages, lack of precision and aesthetic appeal were the main reasons reported by the participants. Interviews with selected respondents uncovered that more than half of the IEC materials published by KSACS were not accessible (52.7%) to the community. The IEC materials were not reaching to the community, as they remained accumulated in some institutions and offices without being distributed for public consumption.

There was a greater demand from the community for IEC materials on how to prevent transmission of HIV/AIDS from mother to child. Majority of the participants (73.3%) reported that the IEC materials on HIV/AIDS that they found were not appealing due to lack of ideal messages, and overall disinterest in going through the materials. Television was the preferred source of information in the form of ads, which would include messages as bites in between TV serials. Majority of the respondents (96.3%) reported possessing knowledge regarding transmission of HIV/AIDS through unsafe sexual behaviour. Few participants (4.5%) believed that HIV transmission could occur through air, mucous secretions and tattooing. Half of the participants were not aware about the services available in Integrated Testing and Counselling Centres. More than 60% of the adults believed that HIV/AIDS has no cure. The overall knowledge on HIV/AIDS was found to be low (20%) among the study participants. The bivariate analysis showed statistically significant associations between location and general knowledge of HIV/AIDS, misconceptions and married status, religion and household size, interest in viewing IEC materials and location and educational level. The study also showed association between attitude and message content.

CONCLUSIONS

More than 70% of the adults had not seen any IEC materials related to HIV/AIDS during the last six months. Lack of interdepartmental coordination, sustainable distribution mechanism for IEC materials, and shortage of funds were the main challenges faced by KSACS. Overall, knowledge about HIV/AIDS was limited. Television emerged as the favoured source of information, and there was a lack of materials tailored for the visually impaired.

RECOMMENDATIONS

The IEC materials need to be printed with larger fonts, more pictures and reduced text; developing guidelines and training for staff and community leaders/volunteers; incorporating small group exercises, role-play and sharing of best practices; utilizing videos and TV promotional materials; implementing quarterly BCC plans and regular monitoring; developing tools for tracking BCC activities; conducting annual surveys to evaluate the effectiveness of BCC activities; involving community representatives as resource persons; assigning a responsible person from each department for IEC material distribution; and improving interpersonal communication with stakeholders. Community participation during IEC material development is also recommended.

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Awareness and Utilisation of Social Protection Schemes by People Living with HIV: A Mixed Method Study in Rohtak, Haryana

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INTRODUCTION

As of 2020, there are 37.7 million people living with HIV (PLHIV) globally, of which, 36 million were adults and 1.7 million were children. In India, the prevalence of HIV was 0.22% (0.17–0.29% adult HIV prevalence) in 2019. HIV/AIDS has more than just an impact on health. PLHIV face stigma and discrimination in all facets of life. This problem can only be overcome with their involvement in Social Protection Schemes (SPS) such as Financial Assistance Scheme for PLHIV, Travel concession schemes, Indira Gandhi National Disability Pension Scheme, Ayushman Bharat Yojna, Maternity Benefit Schemes, Nutrition through ICDS, etc. Haryana having one of the lowest reported prevalence rates of HIV infection and PLHIV population, makes it difficult to access the various SPS catered to their needs.

OBJECTIVES

Assess the awareness and utilization of available social protection schemes among PLHIVs in Rohtak

Understand the perceived barriers in accessing these social protection schemes

METHODS

A mixed method approach was taken to assess adult PLHIV attending the ART clinic at the Pt. B.D. Sharma PGIMS, Rohtak, a tertiary care hospital in Rohtak District, Haryana. A total of 100 PLHIV who attended the ART clinic between December 2022-April 2023 were included through purposive sampling, along with 6 stakeholders from different departments. The study tool consisted of two components: a quantitative part and a qualitative part, inclusive of an interview guide, containing questions regarding awareness and utilization of social protection schemes; promotive and restrictive factors for utilization of these schemes. Data was entered in MS Excel and analysed using Jamovi Software 2.2.5. Appropriate graphs were used wherever, necessary.

FINDINGS

Among the study participants, 58% identified as males, and 42% as females. Around 58% of total participants were aware about various social protection schemes related to HIV/AIDS and for PLHIVs; among them, only 16% had availed BPL card, 9% had availed financial assistance, 7% had availed PM POSHAN and Widow pension scheme, 4% had availed old age pension schemes, 3% National Rural Employment guarantee scheme and Janani Suraksha Yojna, 2% free provision of blood products and 1% Indira Awaas Yojna. Most of the study subjects didn't know anything about the government schemes nor have knowledge regarding the scheme.

One of the reasons for not availing these schemes was fear of disclosure of HIV positive status. Even as a lot of schemes are based on the annual income of the family, many have been erroneously left out of the list even after qualifying for the scheme.

Other factors leading to inaccessibility to these schemes included, the lack of knowledge, the absence of common service centres (CSCs) or Atal Seva Kendra's in their respective localities, and misguidance from officials of CSCs. Financial security in terms of a pension scheme was the major demand. Few patients reported that to access certain schemes they had to travel to their district headquarters and cost of travel was much more than the proposed benefit of the scheme.

“Nobody guided me or told me regarding any of the schemes and therefore there was no way I could have accessed them”

“I travel by bus or private vehicle to reach the hospital for routine treatment, I was not aware of railway benefits and hope that this benefit could be extended to bus services or even reimburse our private vehicle travel bill”

“Poor people are misguided wherever we go, nobody tells us the right way to do things”

“Females never go out of the house and if the schemes their character will be put into question even though it may not be her fault”.

CONCLUSIONS

Overall, there is poor awareness leading to underutilization of social protection schemes by the PLHIV. Inclusion of PLHIV and their families under existing social protection schemes is a must as they are often unable to take care of their families due to financial constraints and need for high out-of-pocket expenditure. Among those limited beneficiaries, availing the benefits of the scheme there is limited information regarding the application process and proposed benefits.

RECOMMENDATIONS

There should be a common service point providing information regarding the different social protection schemes. Inclusion of PLHIV and families under existing government health insurance schemes is a must as they are often unable to take care of their families due to financial constraints and need for high out-of-pocket expenditure. Later steps could involve the development of a composite scheme in collaboration with the different ministries for the PLHIV.

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Understanding and Exploring the Impact of Local Belief Systems on HIV Stigma, Disclosure and Treatment Seeking Behaviours in PLHIV

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INTRODUCTION

Historically, the problem of HIV/AIDS has been exacerbated by a combination of factors such as the alarming rise in the number of new infections and the highly stigmatized and discriminative attitudes towards PLHIV. HIV having both social and bio-medical implications creates significant obstacles in accessing HIV care, treatment and support services and providing care and support. Social relationships and religion play an important role in governing and regulating the behavior, attitudes and perception of the society, including the understanding and perception of diseases.

Kashmir valley has a multi-lingual, multi-racial population and a multicultural society where many negative notions exist around infectious diseases such as HIV. PLHIV are treated differently and stigmatized leading to their social exclusion. Despite widespread campaigns on the issues related to HIV/AIDS, people are generally unaware, leading to stigma and fear. Specifically, in the Union Territory of Jammu and Kashmir, the influence of local religions on the attitude and practices of people remain unexplored. This relationship remains critical and warrants academic attention. Various studies in the past have indicated strong correlation between HIV knowledge and prevention and are yet to be carried out in this geography.

OBJECTIVES

Assess the impact of local religious beliefs on stigma and disclosure behaviours among PLHIV in Kashmir.

Investigate the influence of religious belief systems on treatment-seeking behaviours and HIV-related beliefs of PLHIV in the region.

Identify opportunities for collaboration between religious leaders, clinicians, and public health educators to enhance outreach and treatment plans for PLHIV in Kashmir.

METHODS

This study uses exploratory qualitative methodology, with non-probability purposive sampling. An Interpretative Phenomenological Analysis (IPA)* was used in this study and had a small study sample.

Research participants included consented PLHIV above 18 years, (irrespective of their gender & religion) and on ART for at least a year from the date of initiation of this study. The respondents were seeking treatment from the ARTC situated in a tertiary care hospital, Sher-e-Kashmir Institute of Medical Sciences in the Kashmir Valley. In addition to PLHIV, the study also included in-depth interviews with other stakeholders, such as their doctors, social workers, counselors and religious scholars/preachers to compliment the obtained data. The study commenced with the informed consent to tape-record the conversations following which the interviews were transcribed. The respondent names and addresses were kept off the record to maintain confidentiality.

FINDINGS

This study showed a significant associations between religious beliefs, stigma, disclosure and treatment seeking behaviour of study participants. Evidence also indicated that individual religious beliefs of PLHIV had a greater influence on internalized stigma rather than enacted stigma, with self-blame and shame, aggravating the fear of disclosure. As chastity is a significant moral symbol in religions, study participants expressed fear of stigmatization, owing to this, resulting in low self-esteem and self-blame. Many participants expressed notions around HIV as a 'punishment from God', owing to misdoing, based on religious and scholarly assertion, with a few exceptions, who stated this as an affair between themselves and God. Other stakeholders who were interviewed expressed the vital role played by religion in sensitization of the society in general, and mitigation of stigma arising out of such local beliefs.

The study found a strong association between disclosure and stigmatization, as reinforced by local religious belief systems. The disclosure intentions of patients were largely determined by disclosure target, which for most of the patients was either sexual partner (spouse), immediate family or both. Restricted disclosure was generally attributed to “shame” and the possibility of exclusion from the religious community for not following what is considered righteous or moral as per religious teachings. There were varied responses on disclosure, with some scholars in favour of full/open disclosure, and others who believed in discretion for the sake of religious sanctity. Some study participants, adherent to treatment, believed prayers could cure or help them in their treatment. Throughout the course of this study, it was frequently noted that the study participants held deep-rooted religious beliefs in Kashmir. As per the responses from the participants, it was confirmed by religious scholars that religious beliefs and practices in reality may deviate from what is explicitly stated in the original scriptures. The actual practices reported by the participants may differ from the protocols in the religious texts. Additionally, religious leaders have a role in raising awareness and promoting reduced stigmatization, partial disclosure, and encouraging PLHIV to seek treatment. Scholars expressed reservations on mass sensitization programs for HIV as Kashmir is a conservative society and disclosure of such issues can result in negative experiences of PLHIV.

**IPA is best suited to forms of data collection which invite participants to articulate stories, thoughts, and feelings about their experiences of a target phenomenon. This approach allows the researchers to analyse by a psychological inquiry of how people make sense of their experience. The researcher collects reflective, detailed first-person accounts from the research participants and provides an established, phenomenological-focused approach to the interpretations of these accounts.*

CONCLUSIONS

Findings showed that religion played a vital role in sensitization and mitigation of stigma owing to local belief practices. This study revealed a significant relation between religious belief system and stigma, disclosure and treatment seeking behavior of study participants. Moreover, the study also showed a strong association between the disclosure and stigmatization, as reinforced by local religious belief systems.

RECOMMENDATIONS

Religious beliefs and practices affecting PLHIV need to be addressed by all the concerned institutions in encouraging them to disclose their status, openly seek treatment, and cope with stigmatization. Societal stigmatization and general fear among PLHIV on disclosure will require different intervention methods in the society, from community to government, through mass sensitization programs to be initiated with religious institutions/heads. It is hence imperative that religious heads/leaders are educated on HIV in building greater capacity and encouragement to incorporate such messaging in religious lectures and sermons. Hence, the Government must emphasize on training and instructing religious scholars to be a vital part of such sensitization programs.

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HIV Risk Assessment among Mizoram College and University Students

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INTRODUCTION

Mizoram SACS has made many efforts to increase awareness about HIV/AIDS prevention and risky behaviors among youth especially College and University students as unprotected sexual contact and sharing of syringes have continued to be the two leading causes of HIV infection in the state of Mizoram. With the increasing HIV infection among youths in Mizoram, it is expected that the assessment of high risk behaviors among college and university going youths/students may prove useful in the fight against HIV & AIDS.

OBJECTIVES

The present research study aims to assess HIV risk behaviour among Mizo College and University students and examine the gender differentials in HIV risk behaviour among College and University students in Mizoram.

METHODS

This cross-sectional study was conducted among 416 youth (203 from college and 213 from university) aged 18-28 years in Aizawl, Mizoram. The study participants were selected using the snowball technique.

Socio-demographic profile, substance use behaviour, sexual behaviour, as well as knowledge on HIV and substance use, were assessed using the 2017 National Youth Risk Behaviour Survey (substance use and sexual behaviour sections) by CDC and Adolescent Health Risk Survey by SHALOM. Informed consent was taken from all participants and confidentiality maintained. Data was analysed using SPSS. Kruskal-Wallis test was used to examine the gender-based differences in high-risk behaviours, including substance use and sexual behavior.

FINDINGS

In the study sample, 60% (250) were female students and 39% (164) were male students; 1 student reported other gender and 1 student gender was unknown. Most of the students reported risky sexual relationship; 19.2% students had sexual intercourse at least once in their life, with 60% of them not using a condom the last time they had sexual intercourse. Around 23.8% of students who had sexual intercourse either drank alcohol or used drugs the last time they had sexual intercourse.

The most common reasons reported for not using the condom were no availability of condom, unplanned sex, uncomfortable in use, reduce sexual pleasure and on request of sexual partners. Around 28.6% students reported that premarital sex is wrong and plan to abstain from it; 30.8% students don't think that premarital sex is right, but don't judge those who have had premarital sex. Also, 20.9% responded that if two people love each other and plan to get married, they don't see the harm in premarital sex.

Cigarette smoking and alcohol drinking were the most common used substance among students. The assessment on knowledge of HIV and substance abuse revealed that few students (less than 10%) were unaware of the modes of transmission. The gender differentials were observed in the risky sexual behaviours, substance uses among students; male students were at more risk as compared to female students in Mizoram. Around 29% male students experienced risky sexual intercourse as compared to 12% female students.

CONCLUSIONS

Results of the present study revealed that a higher risk behaviour and substance uses among youths attaining colleges and university in the state were observed; the unsafe risky sexual relationship and substance uses were prevalent among college and university going youths in Mizoram. The most common substance uses were cigarette smoking including other tobacco products and alcohol drinking. It was further seen that a number of participants were 8 years or younger when they first used substances such as cigarettes, alcohol, tobacco products and marijuana. A good proportion of youth are aware about the modes of HIV transmission and of the different substances that be abused.

RECOMMENDATIONS

Based on the implications of the study, the following recommendations may be made:

Need to enhance awareness among youth to have safe sex and stay away from harmful substance uses through newer and innovative awareness approaches including preventive messages using social media and mass media besides the traditional Red Ribbon Club (RRC) outreach approach among college and university going youths in the state.

Programme manager may consider and design the awareness campaign focusing on the students at higher secondary or below to provide the awareness about substance uses and associated risks at early ages.

ACKNOWLEDGEMENTS

The authors would like to thank National AIDS Control Organisation and Mizoram AIDS Control Society for giving the opportunity to them to conduct this study which is a very crucial matter in the fight against HIV and AIDS in Mizoram. The authors would like to thank all the participants of the study, without whom the study wouldn't have been possible.

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An Impact Assessment of Interventions related to Increasing Awareness Levels on HIV and STIs Among College Students in Puducherry

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INTRODUCTION

Increasing awareness of the transmission risks of HIV and sexually transmitted infections (STIs) could potentially lead to the modification of risky behaviours, particularly among college students and youth. In particular, greater HIV-related knowledge is associated with less engagement in risky and unprotected sexual intercourse among female college students only when the risk perception is high [1]. College students usually lack sufficient knowledge about safe sex and the modes of HIV transmission. With this background, the following objectives were ascertained:

To assess the awareness level of HIV and STI among college students

To evaluate the effectiveness of targeted interventions for increasing awareness of HIV and STI

METHODS

The present study was conducted in 32 Puducherry colleges spanning a period of 13 months between April 2022 – April 2023. The study implemented a qualitative component (In-depth interview) for the preparation of a questionnaire followed by a quasi-experimental study design. The qualitative component includes In-Depth Interviews (IDI) with purposively selected RRC coordinators, ICTC staff, Dermatology faculty, Medical officers (n=7) etc. was done till the point of saturation.

Quasi-experimental study design: Pre-intervention baseline assessment of the awareness of HIV and STI among students was conducted in colleges with existing RRC (targets for intervention) followed by targeted interventions for 3 months period among end beneficiaries (college students), the post-intervention assessment was done among the same study participants. Stratified random sampling was used to select end beneficiaries (college students) from the randomly selected colleges.

- No. of Stream of colleges selected (n=32)
- Arts & Science Colleges – 6
- Fine Arts College – 1
- Engineering Colleges – 9
- Polytechnic Colleges – 2

- Law College – 1
- Agricultural College – 1
- Bachelor of education Colleges – 9
- Diploma Teacher's training College – 2
- Catering diploma college - 1

Data collection The principal investigator and co-investigators conducted a baseline assessment of all selected students from each college. The study was carried out after obtaining approval from the Research Committee and Institutional Human Ethics Committee (IEC). The assessment was done among 2 groups. One group included 480 participants (Health Education) whereas the other group of 480 participants indulged in both Health Education and Targeted Intervention. Targeted interventions include sharing health messages through memes, and video posters. The post-intervention assessment was done among the same study participants.

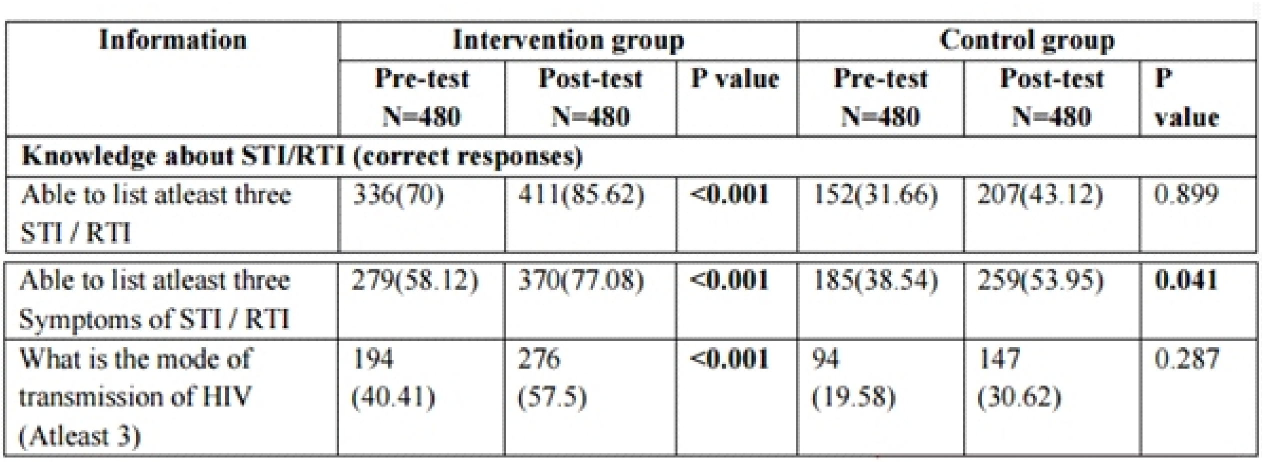
Criteria for selection

- No. of colleges selected (n=32)
- No. of samples allotted per category of colleges (n=960)
- Arts & Science Colleges – 63, health education only 90
- Health education + targeted intervention – 90
- Fine Arts Colleges – 11, health education only 30
- Engineering Colleges – 94, health education only 120
- Health education + targeted intervention – 150
- Polytechnic Colleges – 21, health education only 30
- Health education + targeted intervention – 30
- Law Colleges – 11, health education only 30
- Agricultural Colleges – 11, health education only 30
- Bachelor of education Colleges – 95, health education only 150
- Health education + targeted intervention – 120

FINDINGS

In the study, around 960 participants were included with the mean age of 21.29 years. Of the total participants (n=960), the majority (62.2%) were females and 37.8% were males. More than half, 60% were residing in the rural area and 40% were residing in the urban area. Of 960 students, 47.7% were art students, 40% were engineering students, 10.52% were science students, 0.7% were non-technical, 0.8% were other technical and 0.2% were polytechnic students.

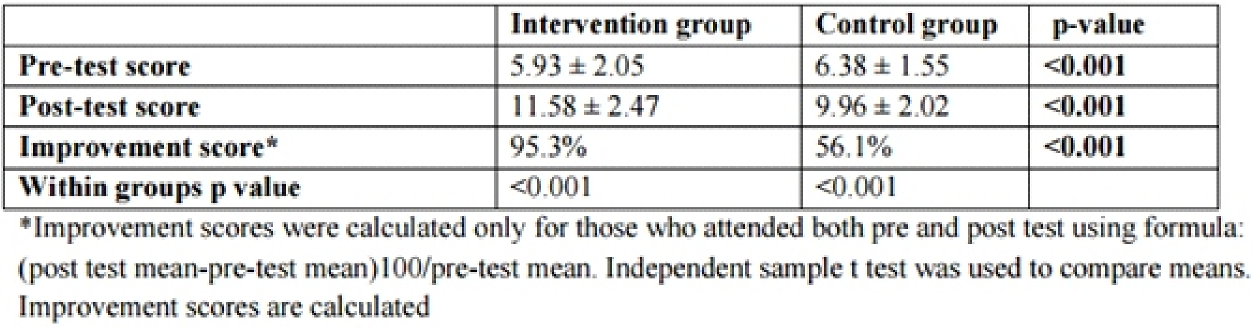
Table 1: Knowledge on STI/RTI and HIV among students



Information	Intervention group			Control group		
	Pre-test N=480	Post-test N=480	P value	Pre-test N=480	Post-test N=480	P value
Knowledge about STI/RTI (correct responses)						
Able to list atleast three STI / RTI	336(70)	411(85.62)	**<0.001**	152(31.66)	207(43.12)	0.899
Able to list atleast three Symptoms of STI / RTI	279(58.12)	370(77.08)	**<0.001**	185(38.54)	259(53.95)	**0.041**
What is the mode of transmission of HIV (Atleast 3)	194 (40.41)	276 (57.5)	**<0.001**	94 (19.58)	147 (30.62)	0.287

Awareness of STI/RTI, mode of transmission, symptoms of STI/RTI, fatality, treatment facility and source of information showed significant improvement in the intervention group since the p-value is less than 0.05. In the control group, awareness of STI/RTI, mode of transmission, symptoms of STI/RTI, fatality, treatment facility available at government hospitals and source of information were found to be significant. (p-value <0.05).

Table 2: Pre and post-test evalution of knowledge on HIV between intervention and control group



	Intervention group	Control group	p-value
Pre-test score	5.93 ± 2.05	6.38 ± 1.55	**<0.001**
Post-test score	11.58 ± 2.47	9.96 ± 2.02	**<0.001**
Improvement score*	95.3%	56.1%	**<0.001**
Within groups p value	<0.001	<0.001	

*Improvement scores were calculated only for those who attended both pre and post test using formula: (post test mean-pre-test mean)100/pre-test mean. Independent sample t test was used to compare means. Improvement scores are calculated

Mode of transmission, symptoms of HIV, detection and testing facility, and treatment, were found to be significant in the intervention group. In the control group, awareness of HIV, its symptoms, detection and testing, and treatment facility showed significant improvement (p-value <0.05). In the intervention group, there was a significant improvement in attitudes towards various aspects related to HIV. These included beliefs about sharing a glass of water with HIV patients, the effectiveness of regular condom use in preventing HIV transmission, the misconception that taking an antibiotic can prevent HIV, the idea that oral sex increases the risk of HIV, and the recommendation to avoid friends who are Intra Venous (IV) drug users. The post-test mean score was 11.58 ± 2.47 in the intervention group and 9.96 ± 2.02 in the control group. There was a 95.3% improvement in the score in the intervention group and 56.1% in the control group. The number of health messages shared among the group was found to be 147, No. of videos shared (58), No. of creative posters made (270), No. of creative meme videos made (78). Sharing was among the students from the same college through their WhatsApp group.

CONCLUSIONS

The students had basic knowledge about HIV and its causes, but they were not sure of all the four routes of transmission. The knowledge of preventive aspects was moderate. The students actively participated in creating IEC tools like posters and videos. The peer-led approach to spreading awareness was found to be efficient.

RECOMMENDATIONS

While the younger generation has adopted more liberal attitudes toward sexual relations, their awareness of the infection risk of HIV and other sexually transmitted diseases (STDs) has remained limited. Awareness of HIV and STI transmission could modify risky behaviour among youth, Hence, frequent sensitization programmes and peer-led approach is needed.

ACKNOWLEDGEMENTS

Authors would like to thank National AIDS Control Organisation and Pondicherry State AIDS Control Society for giving this opportunity to them to conduct this study. Authors also thankful to all the students who actively participated in the study and for bringing out their talents in creating memes, and posters to disseminate HIV awareness among their peers.

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Assess the Knowledge, Attitude and Preventive Practices regarding HIV Infection and AIDS among Youth

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INTRODUCTION

Human Immunodeficiency Virus is a virus that attacks the body's immune system. If HIV is not treated, it can lead to AIDS (Acquired Immunodeficiency Syndrome). When a person is exposed to HIV, there is often no immediate symptoms. The symptoms may remain dormant within the host body which can take anywhere between 2 to 15 years to develop into AIDS depending on the individual immune system. During the initial period of infection, a person with HIV is highly infectious due to the rapid multiplication of the virus in the body, making greatly increasing the odds of transmission to another person. Antibodies to HIV are developed through a process called sero-conversion one to six weeks after the point of infection. The risk of transmission is highest during the post-sero conversion period, when HIV load is highest (Grizzle, 2012) [2].

The youth are one of the most vulnerable groups as far as risk to contracting HIV/AIDS is concerned. One-third of all currently infected individuals are youth (15-24 years), and half of all new infections occur in youth of the same age (Ganle, et al.,2012) [3].

Unprotected sex with an HIV positive person (whether vaginal or anal), using HIV-contaminated needles and syringes, from HIV- positive mother to her child during pregnancy, childbirth, or breastfeeding, and blood transfusion with HIV-contaminated blood. Individuals cannot become infected through ordinary day-to-day contact, such as kissing, hugging, shaking hands, or sharing personal objects, food or water.

OBJECTIVES

Assess the awareness level, attitude towards and practices on HIV/AIDS.

To find the correlation between the knowledge level, attitude and behaviour pattern of the youth in dealing with HIV/AIDS.

METHODS

Descriptive Cross-sectional study was conducted among 800 youth population of Bikaner district. Data was recorded as per Performa. The data analysis was computer based; EPI-info was used for analysis. For categorical variables chi-square test was used. For continuous variables independent samples' t-test was used (p-value <0.05 was considered as significant).

FINDINGS

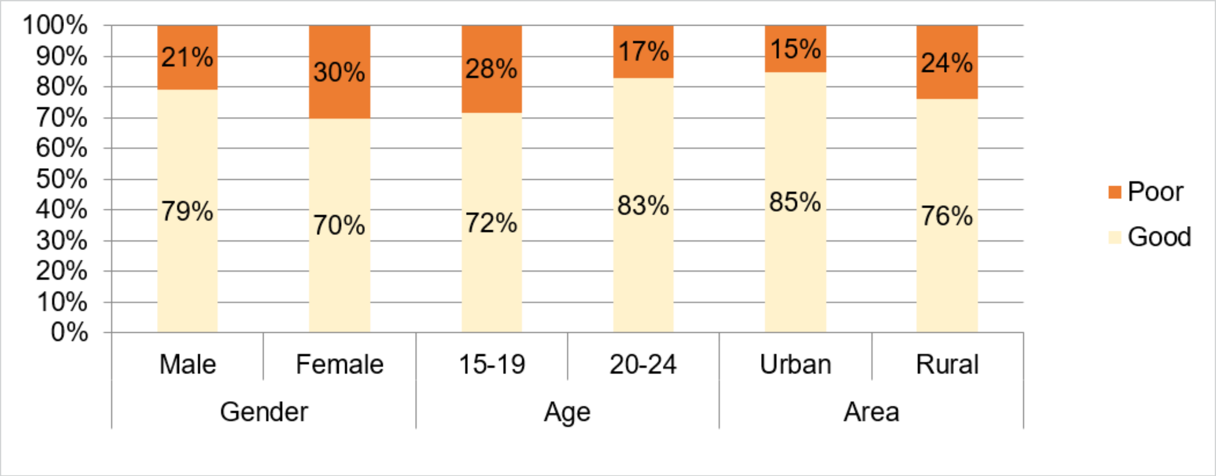
Knowledge

Mean age of the respondents was 18.87 years. Majority of respondent were male (79.09%). It was observed that males exhibited a higher level of knowledge about HIV infection and AIDS (69.94% for females). Additionally, within the age groups, those between 20 and 24 years showed greater knowledge about HIV infection and AIDS (83%) compared to those in the 15-19 years age group (72%).

Table-1: Knowledge about HIV/AIDS of Youth by Background Characteristics

Knowledge	Gender		Age		Area	
	Male	**Female**	**15-19**	**20-24**	**Urban**	**Rural**
Good	367	235	327	286	340	304
Poor	97	101	129	58	60	96
	464	**336**	**456**	**344**	**400**	**400**

Figure-1: HIV knowledge by Gender, Age group and Area (in percentage)



Knowledge amongst urban or rural youth showed that urban youth (85%) have more knowledge about HIV infection and AIDS than rural (76%) in young population which is also supported by Statistical Tests.

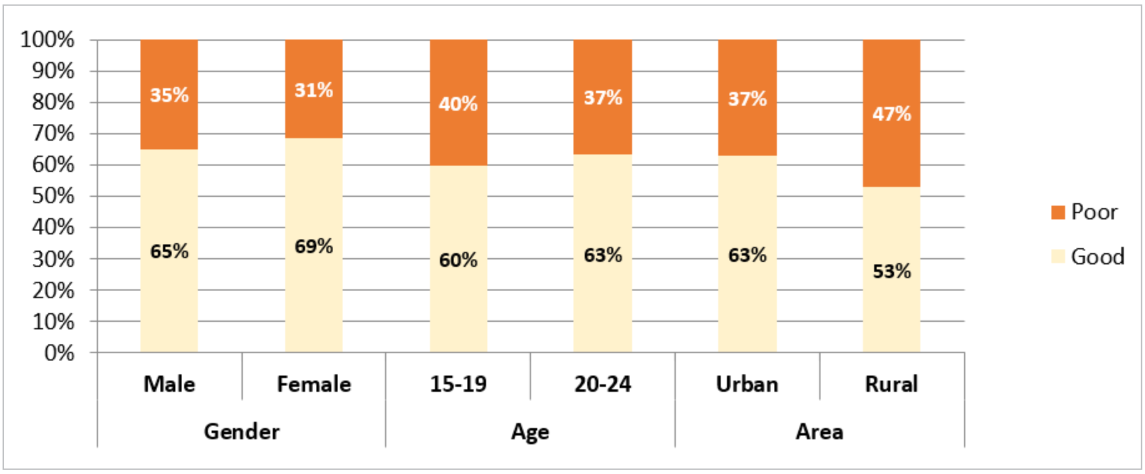
Attitude

It is found that 69% females have good attitude regarding HIV as compared to 65% of male. Area (i.e. urban or rural) showed that young Population in Urban (63%) have better Attitude about HIV infection and AIDS than rural (53%) which is also supported by Statistical Tests.

Table-2: Attitudes regarding HIV of Youth by Background Characteristics

Attitude	Gender		Age		Area	
	Male	**Female**	**15-19**	**20-24**	**Urban**	**Rural**
Good	302	238	274	218	252	212
Poor	162	108	184	126	148	188
	464	**346**	**458**	**344**	**400**	**400**

Figure-2: Attitudes regarding HIV of Youth by Gender, Age group & Area (in percentage)



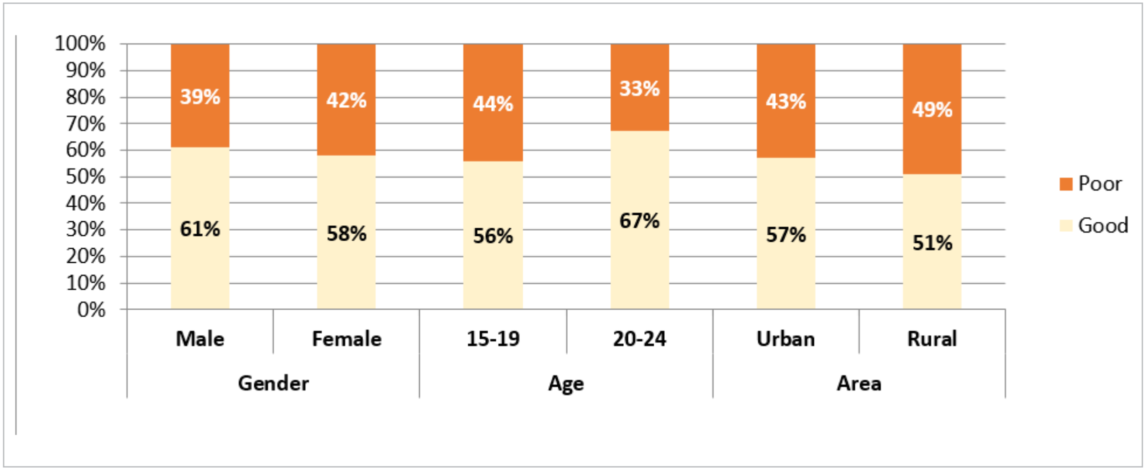
Prevention practices

Age group 20-24 (67.15%) had better knowledge on preventive practices regarding HIV infection and AIDS compared to the age group between 15-19 (55.92%).

Table-3: Prevention practices among Youth by Background Characteristics

Prevention Practice	Gender		Age		Area	
	Male	**Female**	**15-19**	**20-24**	**Urban**	**Rural**
Good	283	195	255	231	228	204
Poor	181	141	201	113	172	196
	464	**336**	**456**	**344**	**400**	**400**

Figure-3: Prevention practices among Youth by Gender, Age group & Area (in percentage)



A 'Yes' in the case of 'Prevention Practice' indicates that the respondent has practiced some prevention practices however for further risk activity variables, an in-depth study is required. It is found that 61% of males have better prevention practices as compared to female i.e. 58%.

CONCLUSIONS

This community-based descriptive observational study was aimed at investigating the knowledge, attitudes, and preventive practices related to HIV infection and AIDS among the youth. The study found that factors such as gender, age, and place of origin significantly influence the level of knowledge among the youth. Additionally, residing in rural areas was associated with specific attitudes, and age was linked to preventive practices concerning HIV infection and AIDS. To obtain a more comprehensive understanding of risk factors within the same population, further research is needed, which will encompass both qualitative and quantitative components.

RECOMMENDATIONS

The level of knowledge regarding HIV/AIDS transmission, prevention and control was considered satisfactory. However, some misconceptions about HIV transmission, risky behaviours and discriminatory attitudes were observed among participants that call for concern and must be addressed promptly. Sexual education in schools, should be reinforced to correct the misconceptions of the overall community as observed in this study, and encourage safe practices and positive attitudes towards PLHIV. Sex education among the youth requires further exploration as knowledge of the same was found to be unsatisfactory as per the study subjects' KAP status.

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The Authors would like to thank National AIDS Control Organisation and Rajasthan State AIDS Control Society for giving them this opportunity to conduct the current study.

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Condom Acceptance among the General Population in Mizoram

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INTRODUCTION

Over the years, HIV prevalence has been high in the state of Mizoram, and the unprotected sex or sexual intercourse without condoms is one of the principal route of transmission of HIV/AIDS among the general population (MSACS, 2022). Simultaneously, it has been observed that the general population is quite informed about the ways of transmission and prevention of the spread of HIV. It is, therefore, imperative to have a closer look at the reason why infections continue to rise when there appears to be ample education on it.

Earlier studies has shown that one's attitude toward condom use serves as a significant predictor of consistent condom usage (Sheeran et al., 1999, Starosta et al, 2015). Earlier studies has also indicated that people refrain from using condoms because they felt it is impeding their pleasure or that it does not really work to prevent infection (Choi et al, 2020; Helweg-Larsen & Collins, 1994 etc). Hence, it is crucial to determine whether these findings hold true within this specific population. With the aim of understanding the general attitude towards condom in Mizoram, the current study explored condom acceptance among the Mizo population.

METHODS

The study investigated age, gender, sexual activity, marital status, number of sexual partners, differences in attitude towards condoms between younger and older youth groups (above and below 30 years), and between those who had sexual intercourse and those who haven't. The role of religion and prediction of actual condom use by condom attitude was also analysed. Data was collected between November 2022 – January 2023, using a multistage systematic random sampling procedure in two phases - 544 young (18-40 years) and older adults (41-70 years), and 514 college and university students from Mizo population residing in Aizawl city. Psychological tools used included Revised Multidimensional Condom Attitude Scale (RMCAS) by Choi at el. (2020), and two survey questions related to religious factors. The data was then analysed using appropriate parametric and non-parametric statistics after data screening in SPSS (V. 22)

FINDINGS

Findings showed that the general acceptance level of condoms by Mizo people across different groups was moderate; no significant associations of age was found. However, the gendered variable was statistically significant in effectiveness, displeasure, identity stigma, embarrassment about negotiation and overall positive attitude towards condoms. Males scored higher on effectiveness, displeasure and identity stigma; whereas females scored higher on embarrassment about negotiation and overall positive attitude towards condoms compared to males. Statistically significant interaction effect of 'age' and 'gender' indicated that among older adult groups, females scored higher on embarrassment about negotiation, whereas amongst the male group, younger males scored higher on embarrassment about purchase than older males. Statistically significant results indicated that those who have had sex had more positive attitude towards the reliability and effectiveness of condoms, attached greater stigma to condom use and have higher positive attitude towards condoms as compared to those who have never had sex.

Significant differences between married and single groups revealed that unmarried participants stigmatized condom use far more significantly than those who are married, Statistically significant results also indicated that participants with more than four sexual partners were significantly higher in their positive attitude towards the effectiveness and reliability of using condoms, experienced greater displeasure in using condom, more embarrassed to communicate about Condom use and have significantly higher positive attitude towards Condom than those with zero sexual partner. Statistically significant results were further found that participants were that were <30 had a better positive attitude towards the reliability and effectiveness of Condom for protection and more generally positive in their attitude towards condoms as compared to those below 30 years of age. Participants below 30 years stigmatized the use of Condom more significantly, more embarrassed to negotiate about Condom use with their partners, experienced greater embarrassment in buying Condoms than those above 30 years of age. Observation of frequency of scores on survey items on religious factors revealed lesser influence of religious factors on condom attitude. Further, it was found that positive attitude towards condom use predicted actual use of condoms among Mizo youths.

CONCLUSIONS

The study findings indicated that the level of condom acceptance was moderate among Mizo population. The factors for unwillingness to use condoms were displeasure, stigma and embarrassment attached to condom use.

RECOMMENDATIONS

Recommendations for the way forward in promoting general acceptance of condom among the Mizo population would include attempts at changing attitude towards using condoms, especially through gender focused attitude training for healthy sexual behaviours, condom related education with special reference to stigma and embarrassment attached to condoms, and increasing dialogue about condom use through means of workshops and seminars among the major CBOs and FBOs in the state, social media, tele broadcasting, radio programmes, films, with targeted focus on the youth.

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Knowledge, Attitude and Practices of the Health Care Providers in Implementing Services to HRGs under NACP in Tamil Nadu

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INTRODUCTION

The Human Immunodeficiency Virus (HIV) and Acquired Immune Deficiency Syndrome (AIDS) were first reported in India in 1986 and alarmed a silent epidemic unnoticed over years. Soon after the identification of emerging cases, the Government of India had devised multiple strategies in controlling the spread of HIV epidemic through preventive drives such as condom promotion, health awareness, and education and screening of high-risk behaviour. Over the past three decades, intensified infection prevention and control measures have been implemented. The introduction of Anti-retroviral drug therapy (ARTs) is considered a milestone in controlling new infections, thus decreasing the trend of new HIV infections in recent years.

Under NACP, the targeted intervention projects are being implemented through NGOs / CBOs across the country. Around 83,000 high-risk group individuals (HRGs) have been registered under the TI programmes in Tamil Nadu and are being provided preventive services. The HRGs consist of Female Sex Workers (FSWs), Men who have Sex with Men (MSMs), Transgender individuals (TGs), and Injecting Drug Users (IDUs). HRGs need to be provided with HIV counselling and testing services once in six months; screening for syphilis once in 6 months and need to be screened for STIs once in every 3 months. The quarterly screening for STI (regular medical check-up) has a specific syndromic case management protocol and this needs to be followed up by the health care providers.

HIV being the terminal disease that it is, along with the consistent treatment regimen that is required to be followed, is also paired with social stigma that further poses a challenge to the healthcare fraternity. To battle this, the personnel who handle the patients should be well versed in various aspects like their Knowledge, Attitude and Practices towards HIV affected individuals

The objective of the study is to understand the level of knowledge, Attitude, Behaviour, and Practices of the health care providers towards the high-risk groups (HRGs) in order to maximize/better the services provided by the health care workers to the HRGs.

METHODS

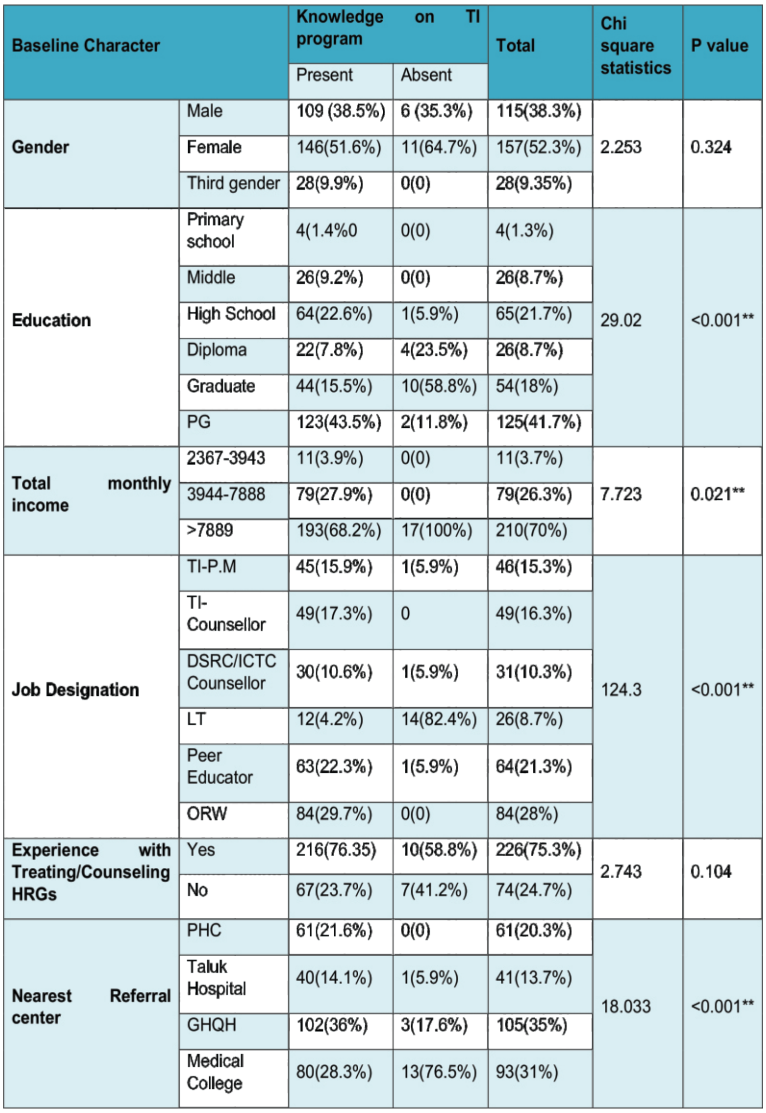
This is a cross-sectional study conducted among health care providers from health care settings and NGOs attached with TI program of TANSACS. The health care providers were from different job profiles who were involved in providing services to the HRGs (Medical Officers, Counsellors, Lab Technicians, Staff Nurses, Project Managers, Project Directors, etc.). An informed consent form was taken from the participants. Questionnaire-based survey was conducted amongst 300 health care providers in determining their knowledge, attitude, and practices while proving health care services.

Health care providers who were working for more than 3 months were selected. The first 100 out of 103 NGO clusters under TANSACS were chosen and 3 health care providers from each of the 100 NGO clusters were recruited for the study.

The final data was aggregated and analysed using SPSS version 2.6 software. Chi-square test was performed to compare proportions of categorical variables. P < 0.05 was considered statistically significant.

FINDINGS

Table: 1 Baseline Characteristics and Knowledge among health care workers on TI program

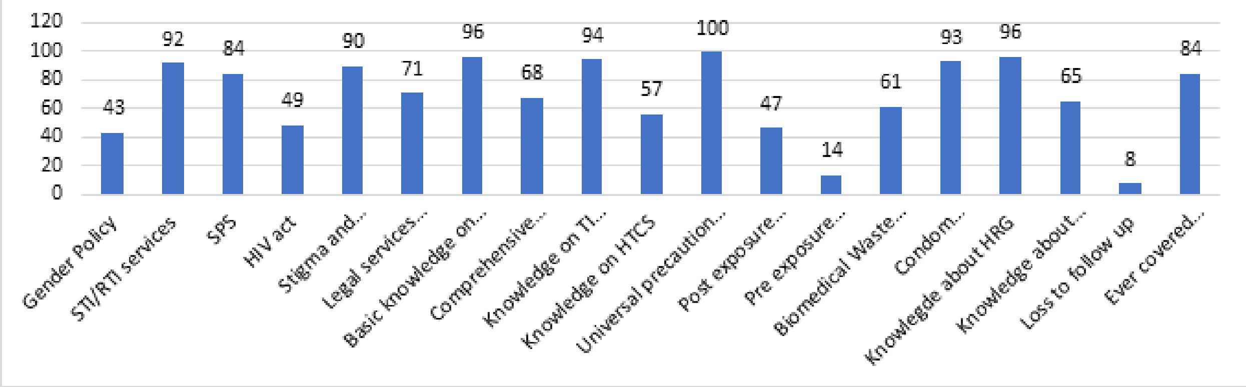


Baseline Character		Knowledge on TI program		Total	Chi square statistics	P value
		Present	Absent			
Gender	Male	109 (38.5%)	6 (35.3%)	115(38.3%)	2.253	0.324
	Female	146(51.6%)	11(64.7%)	157(52.3%)		
	Third gender	28(9.9%)	0(0)	28(9.35%)		
Education	Primary school	4(1.4%0	0(0)	4(1.3%)	29.02	<0.001**
	Middle	26(9.2%)	0(0)	26(8.7%)		
	High School	64(22.6%)	1(5.9%)	65(21.7%)		
	Diploma	22(7.8%)	4(23.5%)	26(8.7%)		
	Graduate	44(15.5%)	10(58.8%)	54(18%)		
	PG	123(43.5%)	2(11.8%)	125(41.7%)		
Total monthly income	2367-3943	11(3.9%)	0(0)	11(3.7%)	7.723	0.021**
	3944-7888	79(27.9%)	0(0)	79(26.3%)		
	>7889	193(68.2%)	17(100%)	210(70%)		
Job Designation	TI-P.M	45(15.9%)	1(5.9%)	46(15.3%)	124.3	<0.001**
	TI-Counsellor	49(17.3%)	0	49(16.3%)		
	DSRC/ICTC Counsellor	30(10.6%)	1(5.9%)	31(10.3%)		
	LT	12(4.2%)	14(82.4%)	26(8.7%)		
	Peer Educator	63(22.3%)	1(5.9%)	64(21.3%)		
	ORW	84(29.7%)	0(0)	84(28%)		
Experience with Treating/Counseling HRGs	Yes	216(76.35)	10(58.8%)	226(75.3%)	2.743	0.104
	No	67(23.7%)	7(41.2%)	74(24.7%)		
Nearest Referral center	PHC	61(21.6%)	0(0)	61(20.3%)	18.033	<0.001**
	Taluk Hospital	40(14.1%)	1(5.9%)	41(13.7%)		
	GHQH	102(36%)	3(17.6%)	105(35%)		
	Medical College	80(28.3%)	13(76.5%)	93(31%)		

Out of 300 health care providers, 115 (38%) were males, 157(52%) were females, and 28(9%) were third gender. The study population included 46 project managers, 49 TI counsellors, 31 DSRC/ICTC counsellors, 26 Lab technicians, 64 Peer educators and 84 ORWs (The baseline characteristics of the study population is shown in Table 1). 42% had an education up to post-graduation and above and almost 90% of the study subjects had a high school and above level of education.

226 HCPs (75.3%) had experience in treating or counselling the HRG population. 31% of clusters had a nearby medical college as a referral centre and 35% had a Government Headquarters Hospital of the district as a referral centre. Awareness about HIV/AIDS related policies and strategies were assessed and it was observed that 130(43%) were aware of gender policy out of which 55 (42.3 %) were males, 61(46.9%) were females, and 14(10.8%) were transgender individuals.

Figure-1: Knowledge about various HIV related program components



According to (Fig 1), more than 90% of the study subjects had the knowledge of STI/RTI services, stigma and discrimination associated with HIV/AIDS, basic knowledge about HIV, TI program components, and universal safety precautions to be practiced while handling blood and body fluids and condom demonstration. Least number of people were aware of pre-exposure prophylaxis.

The knowledge about the current TI program run under TANSACS was assessed across different baseline characteristics of the study population. 283 had knowledge on the program, out of which 109 (38.5%) were males, 146 (51.6%) were females, and 28 (9.9%) were transgender individuals. 59% of participants who were aware of the TI program had graduate level education and higher. This higher proportion is statistically significant at a p value < 0.05. It was observed that subjects with higher monthly income had more knowledge about the program, 193(68.2%) subjects among those who were aware of TI program had a monthly income of more than Rs.7889.

Peer educators (22.3%) and Out-Reach Workers (ORWs) (29.7%) were comparatively more aware about TI program than their fellow counterparts. This shows that field level workers who are in direct contact with the HRG have good knowledge about HIV/AIDS. Among study subjects who knew about TI program, majority i.e., 216(76.3%) had experience with treating or counselling HRGs, with 67(23.7%) having no experience with treating or counselling HRGs. Similarly, those who had a district hospital or tertiary centre nearby as a referral hospital had better knowledge about the program.

276 respondents were aware of STI/RTI services out of which 106(38.4 %) were males, 142(51.4%) were females, and 28(10.1%) were transgender individuals. Education, monthly income, job designation and experience with HRG were related to the above. 146 were aware of HIV Act and 213 subjects were aware of legal services provided to HRGs.

CONCLUSIONS

In general, healthcare professionals exhibited a strong understanding of HIV-related programme events, with females displaying a more favourable knowledge, attitude, and practice in delivering services to High-Risk Groups (HRGs) compared to males and transgender individuals. Furthermore, healthcare providers with postgraduate qualifications demonstrated a superior grasp of existent HIV prevention and care services, with increased positive attitudes towards HRGs. Notably, healthcare providers earning a monthly income exceeding Rs. 7889 displayed enhanced knowledge, attitudes, and practices in servicing HRGs. Among this group, a majority of 210 individuals were well-informed about the practice of universal precautions, which are essential in ensuring the safety of both healthcare workers and HRGs.

Outreach workers, on the other hand, emerged as particularly adept in their knowledge, attitude, and practices when it came to providing services for HRGs, surpassing their counterparts in other roles. As for the attitude and practices of healthcare providers in implementing services to HRGs, it is clear that factors such as gender, educational background, income level, and specific roles within the healthcare system significantly influence these aspects. Females, individuals with postgraduate degrees, higher-income healthcare workers, and outreach workers generally exhibited more positive attitudes and better practices in catering to the needs of HRGs, suggesting the importance of tailoring training and support programs to address these disparities and improve overall service delivery to this high-risk population.

RECOMMENDATIONS

Enhanced Training Programmes should be developed to create specialized training initiatives for healthcare providers, addressing knowledge gaps and enhancing their competencies in delivering services to High-Risk Groups (HRGs). Gender-Responsive Training, which offers tailored programs aimed at rectifying gender-based disparities in healthcare providers' knowledge, attitudes, and practices should be implemented. There should be a focus on empowering male and transgender healthcare workers to enhance their performance when servicing HRGs. Additionally, it may be beneficial to consider providing financial incentives or perks to healthcare providers with a monthly income below Rs. 7889, encouraging their increased commitment and engagement in HRG-related services.

For continued ORW support, efforts should be made to maintain and fortify support and training programs for them, given their demonstrated effectiveness in HRG-related roles. There should also be an emphasis on the importance of adhering to universal precautions in healthcare settings and continue educating all healthcare providers, ensuring the safety of both HRGs and healthcare workers. Lastly, Monitoring and Evaluation systems should be established and upheld, regularly assessing the impact of these recommendations and making necessary adjustments to strategies.

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SEXUALLY TRANSMITTED INFECTIONS

A Study on Knowledge, Attitude & Practices of STI Counsellors Regarding Syndromic Management of STI amongst Attendees of STI/ RTI Clinics in Selected Districts of Madhya Pradesh

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INTRODUCTION

STIs rank among the top five conditions for which sexually active adults seek health care in developing countries. Worldwide >1 million sexually transmitted infections (STIs) are acquired every day. In India, the annual incidence of STIs is 5-6% of the total population. Presence of a STI/RTI in the sexual partner increases the risk of acquisition of HIV from an infected partner by 8 to 10 times. The connection between other STIs and HIV is referred to as “epidemiologic synergy”. Syndromic Case Management (SCM) is the cornerstone of STI/RTI management, under which treatment has been standardized through the use of pre-packaged colour coded STI/RTI drug kits which go hand in hand with counselling involving risk assessment, partner treatment, condom promotion and referral for HIV testing.

OBJECTIVES

To identify knowledge-practice gap, if any, and to evaluate the macro and micro components of Counselling Skills regarding syndromic management of STIs.

METHODS

The study was a cross-sectional observational study conducted at 52 designated STI/RTI centers/clinics with sample population involving all the designated STI/RTI counsellors (52 as sample size during a period of between Oct 2022 - Jan 2023. The Tools included a pre-designed pilot tested semi-structured questionnaire to assess knowledge and attitude of the STI counselors, and a counselling observation checklist. The counselling practices were observed for macro components specific to STIs, its management and prevention. It included discussion on safe practices and preventive measures, comfort in talking about sex and sexuality, risk behaviour assessment, use of IEC, condom demonstration and distribution. Micro components were specific to counselling skill.

Variables

Privacy and confidentiality, sensitivity in asking question, active listening, empathy, summarizing and so on.

Implementation

Following the institutional ethical clearance, a one-day training was organized. A composite list of STI/RTI counsellors was provided by MPSACS, Bhopal. After informed consent, the counsellors were observed for their counselling skills. At each site, one newly diagnosed STI case in individuals above 18 years of age was identified, and they were subsequently interviewed by a counsellor. For quality assurance and quality control, 5% of the records were extracted randomly and double checked, along with a re-survey among 5%.

FINDINGS

The number of patients visiting the STI counsellors in a month in 52 districts ranged from 79 to 1697. The mean age of the counsellors was 41(±6.3) years which included 57.7% male counsellors. Majority (57.7%) of counsellors had work experience of more than 10 years. All counsellors reported to be comfortable with their clients of either gender or belonging to any age group. However only 92.3% felt comfortable in local languages as some clients from the remote interior of the state were difficult to comprehend.

Knowledge Domain

All counsellors (100%) had the knowledge of mode of spread of STI/RTI by sexual route. 96% of counsellors were aware of High-risk Groups (HRG). 88% and 73% of counsellors had the knowledge that females and adolescents are more vulnerable to being infected by an STI/RTI. More than 80% counsellors had correct knowledge regarding kits to be given in case of urethral discharge, vaginal discharge, herpetic genital ulcers, and lower abdominal pain.

Attitude Domain

96% of counsellors agreed that STI/RTI is an important public health problem and 98% of counsellors agreed with SCM. All (100%) counsellors agreed that condom/barrier method of contraceptive helps in preventing spread of infection. 55% counsellors experienced that majority of STI/RTI patients opt for treatment by non-allopathic means and/or traditional healers before coming at STI clinics.

Counselling skill

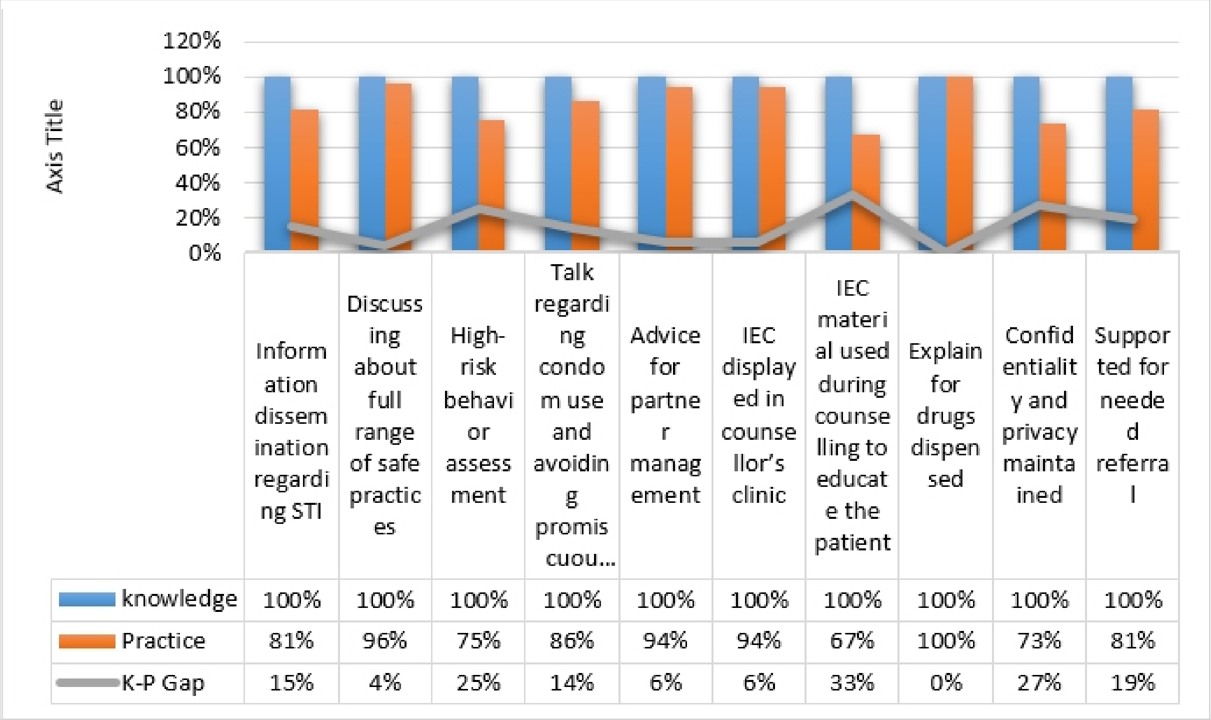
Macro component - 94% of counsellors had IEC material displayed in the clinic but only 63% used them during counselling. Only 77% counsellors assessed risk behaviour. All counsellors counselled patients to stay compliant by giving them necessary instructions and condoms. 71% demonstrated its actual use. 96% motivated patients for partner testing-treatment.

Micro component - The counselling skills of all the counsellors was satisfactory. More than 90% of the counsellors ensured cordial rapport building between themselves & the attendees with skills of empathy, non-judgemental attitude, initial sensitization of patient, and active listening

Knowledge practice gap

A knowledge dissemination gap of 15% was observed. A gap of 25% in high-risk status/ behaviour assessment was identified. Condom use or IEC material was demonstrated only in 67% cases. Privacy was not ensured in 27%.

Fig. 1 Knowledge Practice Gap



	Information dissemination regarding STI	Discussing about full range of safe practices	High-risk behavior assessment	Talk regarding condom use and avoiding promiscuou...	Advice for partner management	IEC displayed in counsellor's clinic	IEC material used during counselling to educate the patient	Explain for drugs dispensed	Confidentiality and privacy maintained	Supported for needed referral
🟦 knowledge	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
🟧 Practice	81%	96%	75%	86%	94%	94%	67%	100%	73%	81%
▬ K-P Gap	15%	4%	25%	14%	6%	6%	33%	0%	27%	19%

CONCLUSIONS

The counsellors possessed adequate knowledge about STIs, their syndromic management, high-risk behaviours, and safe sex practices. They also maintained a positive attitude towards clients and recognized the benefits of the SCM approach. However, a good proportion of STI clients do not come directly to the designated STI clinics.

They possess acceptable micro components of counselling skills. The macro component of counselling which is specific to STIs where Knowledge-Practice gap has been identified includes STI knowledge dissemination, high risk behaviour assessment and use/ demonstration of IEC material.

Furthermore, in numerous instances, the absence of proper infrastructure led to compromises in maintaining privacy and confidentiality.

RECOMMENDATIONS

Reassessment of infrastructure to ensure privacy and confidentiality.

Refresher training targeted on skills related to Knowledge-Practice Gap areas.

A self-assessment checklist for the counsellors on practice components focussed on knowledge dissemination, risk behaviour assessment and IEC demonstration.

Private or traditional healers should be given training or incentive on adoption of SCM (55% counsellors expressed first health care seeking behaviour as out of Govt Facility.)

Regular supportive supervision by SACS to reduce the knowledge practice gap.

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Prevalence of RTI/STI Symptoms and Health Seeking Behavior among Women of Reproductive Age Group in Dehradun, Uttarakhand, India

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INTRODUCTION

Reproductive tract infections (RTIs) are a common health issue among women worldwide, especially in developing countries [1], and can have serious long-term consequences such as infertility, chronic pelvic pain, and even death [1]. In India, around 40 million new cases of RTIs emerge each year, making it one of the top five health conditions in the country. However, many cases of RTIs go undiagnosed due to the asymptomatic nature of some infections, a lack of health-seeking behavior, or social stigma. Symptoms of RTIs can range from back pain to genital ulcers and abnormal vaginal discharge. Left untreated, RTIs can lead to complications such as pelvic inflammatory disease, cervical cancer, infertility, and ectopic pregnancy.

Health-seeking behavior is important in the preventing, diagnosing, and managing of RTIs. Having good health-seeking behavior can reduce costs, disability, and death from diseases. Factors that influence health-seeking behavior related to RTIs and STIs include cultural and social norms, education, income, and access to healthcare [2,3].

OBJECTIVES

Develop a health-seeking behavior (HSB) questionnaire for women regarding reproductive tract infections and sexually transmitted infections (RTIs/STIs)

Estimate the prevalence of self-reported symptoms, health-seeking behaviours, and treatment taken for RTI/STI symptoms in women of reproductive age in the Dehradun district, India.

METHODS

This study used a mixed-method approach to estimate the prevalence of self-reported RTIs/STIs and health-seeking behavior of women in the Dehradun district. The study used a two-phase sampling design. In the first phase, a brainstorming session with nurses and healthcare workers was conducted to generate items for the health seeking questionnaire. All the items were reviewed for duplication and group consensus was taken. Finally, a 24-item questionnaire was adopted with more than 0.80 content validity index and 0.99 content validity ratio. The questionnaire was translated in Hindi and back translated to assess for any discrepancies in understanding. In the second phase, 360 women aged 15-49 years were selected from rural and urban areas of Dehradun district. Sample size was calculated with prevalence of reported RTI/STI in NFHS 4 survey as 11-18 % and design effect of 2. Thereby, 360 women (180 women each from rural and urban areas respectively) were approached for the study. From each block, 100 to 120 women were recruited, 50-60 each from rural and urban areas. Women with a history of hysterectomy, psychiatry illness, pregnant / lactating and going through menopause were excluded. The data collection procedure involved selecting the first house randomly, followed by selecting 20 adjacent households, and recruiting 15-20 participants. The questionnaire used in the study consisted of four parts: basic socio-demographic details, awareness related to RTI/STI, questions related to experiencing any symptoms of RTI/STI in the past three months and treatment taken, and a health-seeking behavior questionnaire in relation to RTI/STI. Data was analyses in SPSS.

FINDINGS

A total of 306 participants were recruited for the study; 25 (6.9%) women did not respond and 29 (8%) women were not available at home during the time of survey. Socio-demographic details revealed that the majority of participants were Hindus, unskilled workers or unemployed, and from lower-middle-income households. Education levels varied, with most participants having completed secondary school. The participants were primarily married women.

Regarding knowledge of RTI/STI, 82% of participants had heard of it, with relatives or friends being the most common source of information. However, 18% of participants had never heard about it. Lack of knowledge about transmission was observed, with 30% being unaware and only 12% believing it was due to unsafe sex with multiple partners. Clinical profiles indicated a history of vaginal discharge in 26.7% of participants, primarily white in colour with a sticky mucoid texture. Foul-smelling discharge and vulva itching, or irritation were also reported. 50% of the respondents reported experiencing symptoms intermittently for over a year.97 (31.7%) reported one or more RTI/STI symptoms in the past three months at time of conducting the survey. 55.84% of participants had discussed their symptoms with their husbands, and 37.1% had visited a healthcare facility. Private healthcare facilities were the most commonly visited. The prevalence of RTI/STI was higher in urban areas (39.5%) compared to rural areas (22.3%).

The perceived barriers revolved around viewing symptoms as routine and self-resolving, reluctance to discuss symptoms due to shyness, apprehension of judgment, and societal doubt about one's character, primarily driven by the prevailing stigma. 91.5 % had scored low on perceived susceptibility to RTI/STI, 90% scored high on perceived severity, 95% scored high on perceived benefit and, 36% scored high on perceived barriers. On elaborating the items related to perceived susceptibility, the response from the participants were - they were able to keep themselves very clean (93%), wash personal clothes daily (94%) take extra precaution of cleanliness during menses (98%) and their partners, or they don't have any related symptoms (90%). Most women agreed that they can suffer from serious illness or spread it to partner if not treated. Participants perceived benefit of treatment also aid in leading a healthy and a respectful life (94%). 20-30% percent said that treatments are expensive, not aware of treatability, and place for treatment. Nearly 18% reported that the health centers/hospitals were at far away distances. Approximately 10% of the participants did not have access to female health worker/doctor.

No significant association was found between health-seeking behavior and visiting a healthcare facility for treatment among women reporting RTI/STI symptoms.

CONCLUSIONS

Though 82 % of participants were aware of RTI/STI, only half of them were aware of any one mode of transmission. Friends and relatives followed by field workers and television, were the main sources of information. RTIs were a significant health problem among the surveyed women, with a prevalence rate of 31.7 %. Prevalence of vaginal discharge was 27%. Prevalence of reported RTI/STI was more in urban than rural areas. Of those having symptoms, about two-fifth visited the health centres, mostly private. The majority of the participants reported low perceived risk of infection and high or moderate barriers to seeking care, mainly due to stigma. Additionally, 10-20% of them cited service-related factors such as high cost of treatment, distant location of health facilities, and lack of female health workers as barriers.

RECOMMENDATIONS

Women should be informed about the various ways of transmission of RTIs and STIs, and the importance of safe practices and preventive measures, through targeted awareness campaigns.

The collaboration between healthcare professionals and women's groups should be enhanced to ensure that women receive accurate and reliable information about RTIs and STIs.

A supportive and non-judgmental environment should be fostered to motivate women to seek healthcare in a timely and appropriate manner.

The accessibility and quality of public healthcare facilities should be improved, and the availability of female health care providers should be increased, to meet the needs and preferences of women.

The financial barriers that prevent some women from seeking healthcare should be addressed, by implementing interventions such as subsidizing treatment costs, providing health insurance coverage, or offering fee waivers for economically disadvantaged women.

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Barriers and Opportunities for Accessing STI Services among Transgenders in Urban Bengaluru - A Qualitative Study

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INTRODUCTION

According to 2011 national census – the transgender (TG) population of the country was counted to be 487,803 with transgender activists estimating the actual number to be to be 5-6 times higher.1-2 Earlier the TG population was grouped under the MSM category for epidemiological and behavioural studies. However, since 2007 they are recognised as a separate category to address their unique needs with specific targeted interventions in prevention of HIV.3 Studies conducted in southern India documented higher HIV prevalence among Hijras (17.5% to 41%), a subgroup of people within the larger TG community. A study conducted in Mumbai STI clinics documented very high HIV seroprevalence (68%) and high syphilis seroprevalence among hijras. Another study documented high HIV and STI prevalence among Arivanis (hijras) with HIV prevalence of 17.5% with 72% having at least one STIs.1 These values are 25 -30 times higher when compared to HIV prevalence in the general population (0.24%) and 2-3 times more than the MSM population, which is a concern. As per NACO guidelines every High-risk Group (HRGs) should visit STI clinics every quarter, especially for regular medical check-ups and for treatment of STI / RTI4.

In June 2016, the Ministry of Health and Family Welfare reiterated our country's commitment towards the goal of ending AIDS as a public health threat by 2030. NACO has revised the national strategic plan to reach the last mile ensuring effective, sustained, and comprehensive coverage of AIDS related services. By 2024, we are working towards achieving the UNAIDS 95 – 95 – 95 goals with 95% who have HIV being aware of their status, 95% of them who know their status are on treatment, and 95% who are on treatment experience effective viral load suppression. To accomplish this, it is imperative to gain insights into the obstacles and challenges that transgender individuals (TGs) face when seeking access to STI clinics. The research findings have the potential to inform innovative strategies aimed at alleviating the prevalence of STIs and HIV within the TG community.5-9

OBJECTIVES

To determine the barriers and opportunities for accessing STI services among Transgenders in Urban Bangalore.

METHODS

A descriptive cross-sectional study was designed and conducted in urban Bengaluru, where 51 Transgender individuals (TG) were contacted to collect qualitative data. The principal investigator was from the community medicine background (working in a Medical College) supported by a research team of social scientists, medical social workers, and trained professionals. Four Focus Group Discussions (FGDs) and 5 Key Informant Interviews (KIIs) were conducted. Semi structured interview guides were developed based on the existing literature and discussions with the key stake holders - Transgender (TG) representatives, Technical Support Unit of Karnataka, the Targeted Intervention wing of KSAPS, medical officer of the STI clinic, and social scientist, regarding the appropriateness of the questions which aimed to understand the barriers and facilitators in accessing STI services in STI clinics. The questionnaire was subsequently approved by NACO. The tools were developed in English and then translated to Kannada. FGDs and KIIs were conducted in the local language Kannada and following each FGD and KII, the research team conducted a debriefing process.

The participants of the study were recruited through purposive sampling with the help of two NGOs (Payana and Samara societies) working with transgenders in Bangalore, Karnataka. Ethical considerations and respondent protection measures were taken by the research team. Ethics approval for the study was given by the institutional ethics committee. One of the FGDs consisted of participants who were a mix of peer educators and transgender individuals from the community and was conducted in the NGO's office premises. The other three FGDs were conducted in the households of the transgender individuals where peer educators coordinated the discussions but did not participate. The principle of data saturation guided the data collection decisions. Permission and consent to record the interviews and FGDs were sought and only when consented, it was done. Other data was captured by making notes through a recorder. The audio files were transcribed and then translated from local language Kannada to English by an expert translator and were coded independently by the research team to avoid bias. The codes thus generated were transferred to an excel matrix. Inductive, content analysis was done to generate the findings of the study. Confidentiality of the data was maintained by storing the data records in a locked cupboard.

FINDINGS

The common barriers and facilitators affecting TG individuals to access STI services are classified into three categories: Factors i) At an individual level, ii) At a health care facility and health care providers, iii) At a program level.

At the individual level self-perceived stigma, vulnerability, discrimination, and fear of disclosure of their sexuality because of concerns over being teased/fear of exclusion in mainstream society, (especially among young transgenders), lack of education, poverty and out-of-pocket expenditure especially for health care needs, lack of alternative occupation/employment opportunities, lack of social upport (most of them are staying away from family), alcohol and tobacco addiction (fear of interaction and side effects when medicines are consumed) are some of the barriers to access health care services including STI services.

“In our community, education is very less and we are also not financially well off, as such, these things make us more vulnerable”. (TG-_FGD) “As it happened in my friend's case. She did not want to go and take treatment and for getting tablets because she knew someone from her area worked in the hospital and was scared of that person violating the confidentiality”. (TG_FGD)

They perceive themselves as the most marginalised group, facing greater vulnerability than any other marginalised subgroup within the social system. Further, there is poverty and economic vulnerability which adds to intersectional stigma and discrimination. It was mentioned that TGs do not talk openly with the doctor and conceal pertinent information related to their sexual health. Most of them are involved in begging and offering sex for money and often work in the morning or late night and hence cannot access the health care services at the regular timings. Even though the TGs are aware of signs and symptoms of STIs, those who are involved in sexual activities often do it in dark places and cannot identify the clients with STIs. Those who know about the services also sometimes do not seek services because of fear of violation of confidentiality.

"Some go for begging in the morning, it is important for them to earn money and others will go in the evening for sex work and may return very late in the morning and sleep off."

"I tell my close friend, and then she will say, if it is happening like that, come here (to NGO) and get treatment, there is this sort of influence within the community, with clients we don't come to know, nor do we have any control. They come to us, we take money, we have sex and send them, we don't come to know about what (health) problems they have". (TG- FGD)"

"We can't test and then engage in sex…so it is not possible (laughter)". (TG- FGD)

The facilitating factors are self-motivation of the individual to get better and remain healthy helps them to seek health care services. Moreover, as they are in a close-knit community; it is easy to contact them and provide services periodically through NGOs peer educators –TG to TG influence is the most common and strong influencer for treatment seeking. However, those who have not registered or migrated are not receiving services.

"People like me who are traditionally considered masculine, have it better as we just wash the makeup off our face and go to the hospital to receive treatment. But, with a feminine body and characteristics face lot of discrimination, embarrassment, insults, botheration and irritations from other people when standing in the queue" (TG_FGD).

"The doctors don't even examine us, he/she writes a prescription and points the finger to go to the next room and do not even ask what the problem is". (TG_FGD)

"Why these facilities are not available in the government facilities? If you take a person to PHC (Primary health care center) they will check only two things, one is Hb, one is sugar and another is BP. Nothing else". (TG_FGD)

At the health care facility: The major barriers faced by TG individuals at health care facilities are as follows: i) Inaccessibility of healthcare services (comprehensive health services under one roof, issues with distance, long waiting periods; ii) Attitude of the health care providers (lack of knowledge and awareness about transgender people, lack of empathy of the doctor, lack of quality care), iii) Out of pocket expenditure (costly treatment, diagnostics and continuum of care). Within healthcare facilities, particularly in clinics situated within major government hospitals, the transgender community has reported experiencing discrimination at various stages, beginning from the entry point, sometimes at the security gate, in patient queues, at the hands of healthcare professionals (both doctors and paramedics), and even at the pharmacy or laboratory. Incomplete treatment is reported to emerge from inadequate access to diagnostic tests and medications. The community also struggles to find tests, leading to delayed or missed diagnosis. Additionally, limited access to prescribed medicines at the subsidised cost medical stores may hinder the completion of treatment regimens, affecting completion of STI treatment.

Transgender individuals tend to favour healthcare facilities that offer comprehensive services and where healthcare providers are empathetic, treating them with the same respect as other patients.

Additionally, health outreach programs conducted by doctors at their homes, scheduled at convenient times chosen by the transgender individuals, facilitate their engagement in healthcare while allowing them to maintain their livelihoods.

At the Program level Partnerships with NGOs serve as crucial contact points and bridges between affected individuals and health care services and awareness. Their expertise and resources enable them to offer tailored assistance and information to those in need. NGOs provide a safe and free of judgement environment for individuals to seek guidance, access accurate information, and receive appropriate referrals to medical professionals or other relevant services.

> *"Here it is difficult to identify partners as they have at least five to six clients per day and many may not have revealed their STI status to their family and would be on treatment and when asked for partner testing, most of them would cooperating with them. They run away from us in the field. Sometimes test kits are not available or the medicines are not available in the pharmacy, non-acceptance of reports by other centers are some difficulties we face in making them come to the clinics". (TG_FGD)*

Peer educators play a unique role in this ecosystem. They have established connections with transgender individuals facing health challenges, creating a sense of empathy and understanding that can be instrumental in encouraging them to seek the help they require. Further challenges are lack of comprehensive health care during the camps and the peer educators expressed that the program demands testing of partners or family. While STIs are indeed a concern, they represent only a fraction of the broader spectrum of health and well-being issues they encounter.

> *"Among Transgenders, the common healtproblems are high sugar, BP, hmmm... and many have pains". (TG_FGD) "Sometimes fever, stomach upset, like any other person all diseases may happen". (TG_FGD) "Mental health is also a concern, there are times when there is depression". (TG_FGD)*

Assessment of TG health needs reveals that a wide array of morbidity factors is at play, emphasizing the necessity for comprehensive care services. Mental health struggles, chronic illnesses, reproductive health concerns, access to proper nutrition, issues related to substance abuse, and preventive healthcare measures are just a few examples of the complex landscape of issues that they have to navigate. Lack of inclusive hiring practices affect employment for transgender individuals who are interested in seeking employment. Begging and engaging in commercial sex work have been legacies for many transgender individuals due to a combination of systemic discrimination and limited employment opportunities. Transgender individuals reported to often face significant challenges when seeking employment due to prevailing bias and prejudice. Lack of inclusive hiring practices affect employment opportunities for transgender individuals.

> *"We have given so many complaints, but no use, see evenwith condom there is problem limited lubrication and if wedo thigh sex there are chances that they may break. So,when the quality of services is less, then how they willreduce STI". (TG_FGD)*

CONCLUSIONS

The common factors identified are of three categories i) related to individuals, ii) related to health care providers and facilities, iii) those related to healthcare programs.

Lack of individual awareness and motivation, self-perceived discrimination and stigma, fear of rejection from mainstream society, lack of social support, lack of alternate employment, apathy of doctors, and fear of breach in privacy and confidentiality, are issues hindering access to services at an individual level., However, peer group influences play an important role in seeking/accessing health care services and hence ensure complete treatment and cure.

The common factors at the health care include inaccessibility to the health care facility, unavailability of all facilities under one roof (private hospitals), long waiting queues, insensitive health staff, unavailability of testing kits and lack of confidentiality and privacy remain as issues faced by TG individuals at a facility level.

The common hindering factors related to healthcare programs for TG individuals include, lack of sensitization of doctors/health care providers about transgenders, HR issues like unavailability of health care staff at the centers, unavailability of medicines and lab tests, low salaries and incentives for the peer educators, long waiting periods, programmatic issues where partner testing is mandatory. Motivational factors include conduction of periodic health camps at flexible timings at their households increasing the accessibility, facilitation by peer educators and staff of NGOs during health seeking.

RECOMMENDATIONS

IEC activities among the TG individuals about STIs and their treatment through various mediums.

Making TPHA titers and other tests available at Suraksha clinics or at least testing the samples collected at the clinics and tests done at a designated referral laboratory.

Continuous supply of drugs at the Suraksha clinics and attending to other co-morbidities along with syndromic management of STI with diabetes, alcoholism, hypothyroidism, and hypertension (NCDs) – in integration and co-ordination with NPNCDs programs.

Incorporating transgender individuals through employment into the different tiers of society, ranging from the state to district, block levels, and beyond, and involving them in discussions, which is proven to be beneficial in comprehending the challenges faced by the transgender community. This approach enables the collection of tailored insights from them, aiding in the development of targeted strategies and policymaking. Doctors' sensitization about the anatomy of transgenders and issues faced by them.

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TARGETED INTERVENTIONS

Barriers in the Service Uptake among Network based Female Sex Workers in Delhi

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INTRODUCTION

The pattern of sex work has changed from hotspot based geographical locations to operator managed networking (ihat,2020). Different networks have emerged in the Female Sex Workers (FSW)-client solicitation space due to the smart phone and internet revolution. Network operators drive these networks and plays a significant role in facilitating the solicitation process. Under NACP, the targeted interventions (TI) for FSWs have adopted the network-based approach to provide HIV/AIDS related for FSWs in Delhi. However, most FSWs and network operators continue to communicate with one another only through their mobile phones, with limited face-to-face contact; this makes it difficult to reach FSWs located in TIs. Additionally, this has the capability to elevate the risk of HIV transmission and other sexually transmitted illnesses.

The reduction in ground level visibility of FSWs due to the emergence of a network-based client solicitation system has presented challenges for TIs in establishing communication with this group. This has consequently led to impediments in the delivery of essential services to sex workers.

OBJECTIVES

Assess the barriers encountered by network-based sex workers in Delhi when accessing service uptake.

Evaluate the effectiveness of HIV prevention services delivered to female sex workers (FSWs) through the network-based approach implemented by Targeted Interventions (TIs).

Investigate the role of TIs in facilitating outreach to all FSWs associated with networks and expanding their coverage within this population.

METHODS

The study has used an exploratory research method to understand the barriers in service uptake among the network based female sex workers through the primary and secondary sources of information. A qualitative research approach was used to collect primary data from respondents. For secondary data, previous studies, status reports and evaluation reports, research papers and other study material have been referred to.

In the present study, stratified purposive sampling method was used to select the 5 out of the 32 TI NGOs in Delhi. In the first stage, Delhi was categorised into 5 zones, namely, East, West, Central, North, & South and a TI NGO was selected from each zone. In the second stage, 20 network operators and 50 FSWs were selected in the study through convenience sampling method.

The study involved data collection through a detailed questionnaire administered to three key respondent groups: 1. Network operators, 2. Female Sex Workers associated with network operators, 3. Service providers – TI staff (including project managers, counsellors, and outreach workers).

Focus group discussions and in-depth interviews of key informants were carried-out to collect information through the structured interview schedule with open-ended questions. Descriptive and inferential statistics were used for data analysis purposes.

FINDINGS

The average age of entering into sex work is typically between 22 and 25 years. Of the surveyed sex workers, 60%were in the age group between 30-40, followed by 25% for the age group between 20-30. The remaining 15% were over the age of 40.

Among the FSWs surveyed, 45% identified as housewives, 29% worked as house help, 18% were employed in factories, and 6% worked in shops. This data indicates that, in order to fulfil their family's financial needs, these women often choose sex work as an alternative livelihood. This is because they lack education or skills, making it difficult for them to find other employment opportunities that provide both flexibility and the potential for earning a good income.

A majority of FSWs demonstrated awareness about the HIV prevention services and counselling offered by the Targeted Intervention (TI) program. However, approximately 10-15%of sex workers remain excluded from these services. This can be attributed to the nature of sex work, characterised by frequent changes in the working locations of sex workers. Furthermore, sex workers may be discouraged from visiting TI offices or engaging with outreach workers due to the fear of potential exposure and consequent repercussions. The majority of FSWs surveyed (43%) hailed from Uttar Pradesh, followed by 17% from Bihar, 8% from Jharkhand, 12% from Delhi itself, 6% from Odisha and 5% from West Bengal. The data shows the various reasons for FSWs coming to Delhi. Among the respondents, 32% of the FSWs came to Delhi on the pretext of marriage/love, while 26% came on the pretext of finding a job. Additionally, 22% of the FSWs moved to Delhi after getting married, and 10% came to live with their relatives.

The findings highlight important limitations in service uptake for network-based sex workers, which include difficulties in reaching them because they are less visible, reduced face-to-face interaction with outreach workers and counsellors, no fixed visiting time of outreach workers, and the reluctance of FSWs to visit TI offices or network operators' residences during their working hours out of fear of losing clients. Also, as most of the FSWs are working secretly, they don't find any common physical space for expressing their problems and concerns and find it difficult to get mutual support. As observed, the changing nature of sex work, where sex workers frequently change location was one significant reason for this exclusion. Another factor hindering sex workers from reaching TI offices or contacting outreach workers was the fear of being exposed, reflecting the stigma associated with their occupation.

Efforts to address these challenges include increasing outreach activities, educating network operators, and conducting regular monitoring and follow-ups.

- Efforts made by TI to overcome these barriers
- Strengthening outreach activity (SOA) through CBS camps
- Training and capacity building of Network operators in small groups also rapport building with new Network operators.
- Regular monitoring and follow-ups by ORWs .

CONCLUSIONS

This study analysed both traditional and new approaches and tried to understand the mechanism and constraints of network approach. To better understand the whole process the study was conducted at three levels – TI staffs, Network operators and FSW. Structured interviews, group discussions and observation method were used to collect the data. Profile of network operators was also collected to understand their roles and association with FSWs.

Based on the data collected from study, following conclusions were recorded:

Despite the fact that this new network strategy appears to be more practical for FSWs and network operators, TI finds it to be both useful and problematic. It was stated that after COVID-19, the number of FSWs climbed by a factor of ten, but at the same time, it has become more difficult to communicate with them. It is also observed that there has been a rise in the registration of FSWs and Network operators.

The nature of solicitation work is very dynamic, especially after adopting modern methods of communication technology; it has become more transient in nature.

FSWs face challenges in directly accessing services and counselling. These gaps in accessibility of services by FSWs increase their risk and vulnerability towards HIV and other sexually transmitted diseases.

RECOMMENDATIONS

To address the needs and challenges of virtual network-based FSWs, a strong, responsive, and user-friendly virtual system needs to be built, which includes small virtual sessions on different components of service intake, condom education, referrals, their importance, and methods of intake. This will reduce the risk of information loss during the message delivery process.

The virtual availability of health service providers and counsellors will help address the issues of STIs and other health-based risks among FSWs. It will also ensure their privacy and enable them to receive hands-on support and services.

As the network-based approach has increased the mobility of FSWs, creating a barrier to regular service uptake, there is a strong need to develop a centralized one-window system where FSWs can access these services from anywhere. A unique ID for each FSW can be created and registered on this app/system, allowing them to access counselling and services from any part of the country.

A network-based approach may require additional resources, such as more trained personnel, knowledge, and access to IT tools for collecting and analysing data on the networks of FSWs and Network Operators.

As peer educators and network operators are key links in the network, program strategies need to be designed with them at the centre, paying more attention to their capacity building and sensitization. Advocacy tools need to be developed for TIs to involve network operators in service delivery.

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A Study to Assess Community-based HIV Screening Implementation through Targeted Intervention Project among Female Sex Workers in East Delhi

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INTRODUCTION

The HIV epidemic in India is concentrated in nature. The National AIDS Control Programme (NACP) aims at halting and reversing the HIV epidemic in the country. The National AIDS Control Organization (NACO) has targeted its preventive efforts towards sub-groups of population identified to be at high risk of acquiring HIV infection. These HRGs include Female Sex Workers (FSWs), Male having Sex with Male (MSM), Transgenders (TGs), Injecting Drug Users (IDUs) and Bridge populations such as Migrants and Long-Distance Truckers. CBS is important for improving early diagnosis, reaching first-time testers and people who seldom use clinical services. It is carried out through Mobile HIV Counselling and Testing Services (HCTS), screening by ancillary health-care providers, screening of HIV by Targeted Intervention (TI-ICTC), HCTS for prison inmates, HCTS at the workplace.

The National AIDS Control Programme (NACP) faces challenges of increasing the coverage of HIV testing, including care and treatment services among HRGs. To design and implement HIV prevention strategies there is a need for detailed information about socio-demographic characteristics and social structures of commercial sex workers. NACO acknowledges that targeted interventions must be preceded by operational research.

OBJECTIVES

To study the effectiveness of CBS in early diagnosis, reaching first-time testers and people who seldom use clinical services.

To assess the coverage of TI programme among Female Sex Workers for HIV screening.

To determine whether TI is following process of implementation of CBS as per operational guidelines of CBS screening.

To explore whether timeframe between reactive and confirmatory test is a barrier for referral linkages to ICTC and ART.

To explore the barriers and challenges faced by TI to ensure 100% coverage of prioritized HRG for HIV screening.

METHODS

The study was undertaken using the mixed methods in two TI partners in East Delhi District and female sex workers operating in East Delhi area were selected randomly. The study included analysing HIV testing activity of TI through record analysis of data maintained by TI: relevant data for 2021 was collected from the TI. Qualitative research methods were also used to generate detailed descriptions of experiences of high-risk groups (HRG-FSW) owing to the need for exploration of opinions, perceptions, the underlying reasons for barriers and challenges faced by TI. In-depth interviews (IDI) were employed with key persons at TI (key informant interviews) which were audio-recorded. The interview was structured on a list of issues to be discussed - motivation, behaviour and perspectives of client and service providers. 8IDIswere conducted from both TI. Moreover, 8 focus group discussions were conducted among HRG (female sex workers). They were audio recorded and documented with permission from the participants. The site for the FGD was the Drop-in-centre (TI)

Subject selection: FSWs 18 years and above were enrolled for focused group discussion. 8 focus group discussions (FGD); for High-risk groups from both TI

Ethical clearance was obtained from the Institutional Ethical committee of Lady Hardinge Medical College prior to beginning the study. The IDIs of TI staff were conducted in private and confidential locations to allow participants to be honest and open in their opinions. The FSWs were engaged in FGDs in a nonthreatening and confidential setting. HRG participants were never required to disclose their HIV status at any time. No names were used during the discussion. The sessions were audio-recorded with permission from the participants. There was confidential handling of data by the researchers.

FINDINGS

A total of 8 IDIs were conducted among TI staff and 8 FGDs were conducted among FSWs from 2 TIs namely AIDENT and HUMANA working with FSWs in East Delhi. Along with qualitative data, record analysis of data from April 2021-March 2022 was also done. The findings are summarized below:

Among 2600 individuals screened for HIV through CBS by TI NGO AIDENT,319 were first time testers (12.3%). Among those who were screened 78(3%) were symptomatic. None of the FSWs were reported to be reactive by screening. Only 17 partners and spouses had been tested and none were positive. At the TI NGO HUMANA among 1982 individuals who were screened for HIV through CBS ,570 (28.7%) were first time testers. One FSW was reported reactive on screening, with the confirmatory test done at the ICTC. The percentage of targeted individuals covered during screening were 70% at AIDENT and 76% at HUMANA TI. The TIs were following the operational guidelines of CBS. Micro plans with site lists were available. The maximum time period between reactive and confirmatory test was reported to be around one month.

Barriers faced by TI: Barriers related to getting tested in community-based settings which included time, place of testing and availability of kits. Other barriers in getting confirmatory tests in facility settings included attitude of counsellors at the ICTC, time spent at the facility, stigma, and discrimination. The CBS approach was found to be suitable for the FSWs with regards to their timings of work and convenience.

Challenges faced by the TI: Sometimes some of the workers have to face social stigma or discrimination because of working in the field of HIV/AIDS, with other operational and budgetary issues; Programmatic issues like shortage or interrupted supply of condoms, disruption in supply of screening kits, delay in release of grants by 4-6 months, non-revision of salaries leading to low retention of staff, need for better infrastructural facilities such as computers in light of digitization of work, and increased rent for office space.

CONCLUSIONS

The study revealed that CBS is an effective and convenient strategy adopted by the TI programme. Both TI and HRGs showed satisfaction with CBS strategy and expressed that the strategy was much more convenient for them, although certain challenges still remain in practical implementation of the strategy which included social stigma for commercial sex work, operational and budgetary constraints, programmatic components like shortage of logistical or interrupted supplies, lack of motivated staff etc. HRGs also expressed a need for getting health related services other than HIV/STI testing at the TI itself for themselves and their family members.

RECOMMENDATIONS

Uninterrupted supply of condoms & RTI/STI kits & other commodities. Timely disbursements of salary preferably monthly along with regular revisions in salary for staff satisfaction and retention. Expansion of services provided by the TI to include general health care services for HRG and their family members under the same roof.

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A Study on Risk Behaviour and Practices Among Men Who Have Sex with Men in West District of Tripura: A Cross Sectional Survey

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INTRODUCTION

Globally, men who have sex with men (MSM) remain disproportionately infected and affected by HIV. In high income countries, the trend of the HIV epidemic has been on a decline except among MSM. HIV incidence and prevalence from low and middle-income countries suggest that the HIV epidemic among gay, bisexual and other men who have sex with men are on markedly different with an increasing prevalence of HIV amongst this high-risk group (HRG).1 In recent years, a fast-spreading HIV epidemic among MSM presented a new challenge worldwide.2 Globally, the prevalence of HIV among MSM is high.3 The National AIDS Control Organization (NACO) of India considers MSM to be a core HRG for HIV, with an estimated prevalence of 4·3%; more than 16 times higher than the national average of 0·3%.4

MSM population often engage in high-risk sexual behaviours which not only increasing the risk of acquiring HIV and other sexually transmitted diseases for them, but also for their partners.5 Successful HIV prevention among MSM depends on changing risk behaviours that put them at high risk for HIV. In order to promote changes in the behaviours mentioned above, every country needs evidence-based information to guide the design of appropriate prevention programs and to monitor and evaluate whether these efforts are successful.6 Hence, it is important to understand the dynamics of sexual behavior of this key population.7

Non-disclosure of their sexual behavior by a significant number of MSM in India has contributed to limited understanding and knowledge regarding their sexual practices. Without this knowledge it is difficult to plan effective MSM-related HIV prevention tools and programmes.8 objectives are to assess the risk behaviour and practices among men who have sex with men (MSM) in West District of Tripura and to study the knowledge and perceptions of HIV-AIDS among the study participants.

OBJECTIVES

To assess the risk behaviour and practices among men who have sex with men (MSM) in West District of Tripura

To study the knowledge and perceptions of HIV-AIDS among the study participants

METHODS

This community-based cross-sectional study was conducted among adult MSM populations residing in the West District of Tripura between September-December2022. The Inclusion Criteria was men in the age group between 18-45 years having sex with other men regardless of how they identified themselves (e.g., gay, bisexual, homosexual, or heterosexual) and have reported having anal sex, paid or unpaid, with another man in the past 12 months. The study excluded individuals who declined to participate, refused to provide written informed consent, and those who showed signs of significant mental illness, such as untreated psychosis or mania, or individuals with a primary psychotic disorder, even if under treatment. A Sample size of 90 was calculated by using the formula n = Z21-α/2 × pp./d2. Considering the prevalence of consistent condom use (CCU) with regular male partner among MSM is 27%9, at significance level of 95%, absolute precision (d) of 10% and considering a non-response rate of 10%. Therefore, 96 participants were recruited for the study. The subjects were recruited by using snowball sampling technique and face to face interview were conducted by a trained field investigator in a local language after obtaining written informed consent. Initial 'seed' participant was identified in consultation with non-governmental organisations (NGOs) which were working for MSM in West District of Tripura. Each initial seed was invited to participate in the study and then was asked to provide multiple referrals with the same inclusion criteria. Each new referral then provided with more data for referral and with the recruitment process being continued till the desired sample size was achieved. Information was collected by using a predesigned, structured interview schedule. Each interview session continued for a period of 30-45 minutes. The interview schedule which was used for collection of data consisted of 4 sections: socio-demographic profile, risk behavior and practices, knowledge related to HIV /AIDS, and perception of HIV /AIDS. The study was conducted after getting approval from Institutional Ethics Committee of Agartala Govt. Medical College.

FINDINGS

The data was collected from 96 subjects with the findings as provided below:

Socio-demographic characteristics of the subjects

The survey comprised subjects with a median age of 28 years, with the largest proportion falling within the 26 to 30 years age group. The majority of the subjects were urban residents (82.3%) and had completed their education up to the 12th standard (71.9%). A substantial proportion identified with the middle class (47.9%). In terms of caste distribution, a significant portion belonged to the scheduled caste (37.5%), followed by the general caste (33.3%), The subjects were predominantly Kothi (65.6%), never married (81.3%), and only 17% of the subjects were currently married.

Risk behaviour and practices among MSM

In the present study, a majority of the respondents (n=91; 94.7%) revealed that the nature of their first sexual experience with a male partner was due to attraction towards the male partner while 2.1% opined that it was a forceful act. Median age of first sexual experience among MSM was 16 years. In the 12 months prior to the conduction of the survey, it was revealed that only 7 (7.3%) respondents had anal sex with one partner while most of them 53 (55.2%) had multiple sexual partners. In terms of condom use, 2 (2.1%) respondents reported never having used condoms during anal sex and only 13 (13.5%) used condoms every time they engaged in anal sex. Twenty-One (21.9%) respondents had sexual intercourse with female partner in the last 12 months and among them 16 (76.1%) used condoms. However consistent condom user was observed in 6 (28.6%) during sexual intercourse. It was also revealed that the majority (59.3%) had received money or gifts in exchange for sex. Only 2 (2.1%) consumed Ganja three or more days in a week and none had ever injected drugs for non-medical reasons.

Knowledge related to HIV-AIDS among MSM

94 (97.9%) subjects in this present study have heard about of HIV/ AIDS among them 88 (93.6%) were aware that a person can be infected with HIV by having unprotected sex with an infected person. 79 (84.0%) knew that a person can contract HIV by sharing infected needles and 82 (87.2%) knew that a person gets HIV/AIDS through infected blood transfusion needles. Out of 94, 61 (64.9%) correctly identified that people could protect themselves from HIV by having one uninfected faithful sex partner and 77 (81.9%) answered correctly that people can protect themselves from HIV/AIDS by properly making use of every time they have sex. 60 (63.8%) answered correctly that people protect themselves from HIV/AIDS by getting blood thoroughly checked/tested before transfusion. A total of 94, 30 (31.9%) had misconceptions that a person gets HIV virus from mosquito bites whereas18 (19.1%) answered that they don't know about the transmission of HIV virus and 23 (24.5%) opined that a person gets HIV by sharing a meal with someone who is infected.

Almost 80.9% of subjects could answer correctly that a pregnant woman infected with HIV/AIDS transmits the virus to her unborn child. 58.5% subjects opined that a woman infected with HIV/AIDS transmit the virus to her new born child through breastfeeding.

The main source of information cited, from where almost 73 (77.7%) subjects came to know about HIV/ AIDS were through NGO Workers.

CONCLUSIONS

In this present study, majority of the respondents had revealed that they have had sexual relations with multiple male partners whereas only very few subjects consistently used condoms during sexual intercourse. A very small number of subjects reported that they had consumed Ganja three or more days in a week and none of the study participants had ever injecting drugs for non-medical reasons. A majority of the subjects had knowledge about route of transmission and preventive methods of HIV/AIDS while misconception regarding transmission of HIV/AIDS were marginally higher among subjects. Majority of the subjects felt themselves as having low risk to being infected with HIV/AIDS in this present study.

RECOMMENDATIONS

There is further requirement for a comprehensive study encompassing all districts of Tripura in gaining a deeper understanding of the dynamics of sexual risk behaviours for HIV among MSM. Such insights will be invaluable in formulating effective strategies for HIV prevention within this key population. Moreover, it is crucial to implement strategies, such as school intervention programs, with a primary focus on educating and guiding youngsters before they initiate sexual activity. This program should emphasize the significance of responsible sexual behavior, including aspects such as the number of sexual partners and the consistent and proper use of condoms.

ACKNOWLEDGEMENTS

We would like to thank TSACS for giving us this opportunity to work for the benefit of the society and contribute to their effortless work. This project wouldn't be possible without the support and help from TSACS. Special thanks to Strategic information-Research and Evaluation division of NACO for allowing us to work on this project. Last but not the least; we would like to thank our HOD, Community Medicine, AGMC, Research Review Team and Principal, AGMC, for supporting us throughout this project.

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Facilitators and Barriers in the Uptake of HIV-related Services among Spouses of Male Injecting Drug Users (IDUs): A Cross-Sectional, Multi-site Study from Delhi, India

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INTRODUCTION

The recent national survey on the magnitude of substance use in India found that there are around 850,000 people who inject drugs (PWID) in the country (Ambekar et al., 2019). PWID also known as Injecting Drug Users (IDU), have the highest prevalence of HIV in comparison to other high risk groups. Majority of PWID had had sexual intercourse with a female, out of whom 70% had sex with a regular sexual partner (RSP). However, consistent condom use with RSP in the past 12 months was only 15.9%, which puts these partners at high risk of contracting HIV and other STIs. Studies across the world have found high HIV prevalence among RSPs of PWID (prevalence ranging from 3% to 35%). There are limited studies on RSPs of PWID in the Indian context, but with existing studies show high HIV prevalence in this population.

The National AIDS control Programme (NACP) through its different phases, places importance on reaching out to RSPs of PWID. However, programme experience shows that it is difficult to access this population, which has been documented in some studies as well. Even though RSPs had high knowledge about HIV, uptake of HIV testing and treatment was very low (Murthy, 2012). An earlier multisite, cross-sectional, mixed-methods study on spouses of PWID (n=433) in Delhi showed that spouses of PWID face multiple risks and vulnerabilities that places them at risk of HIV. Yet less than half of spouses got tested for HIV. About half of the spouses were not aware of their partners' drug use or injecting status. Hence it was discovered that their perceived needs were different from those of the NACP (Rao & Kathiresan, 2020).

OBJECTIVES

To understand the various barriers and facilitators in HIV-related service uptake among female sexual partners of male PWID that can help in devising strategies to improve access and optimum utilization of the same.

METHODS

The current study used a cross sectional, observational, mixed-method (Quantitative and Qualitative) design. The objectives of the study were to assess HIV-related risk behaviours in male PWID and their female spouses, registered and accessing HIV services in one of the Targeted Interventions for IDUs supported by DSACS, and to assess barriers and facilitators in accessing HIV-related services by the female spouses of male PWID.

Quantitative component

200 Male PWID (50 from each of the four selected IDUs Targeted Interventions) who were registered in the TI, married, and were active clients of the TI were interviewed after taking their consent. The interview was conducted using a structured interview tool prepared for the study. Apart from their own drug use practices, the participants were also asked about their sexual behaviour. Additionally, the participants were enquired about their perceptions regarding their spouse getting HIV, HIV testing of their spouses, their willingness to get their spouses tested for HIV, and potential barriers for their spouses to avail HIV-related services. The data was analysed using SPSS 26.0.

Qualitative component

Selected male PWID from among those who participated in the quantitative component were further interviewed for qualitative data. In-depth Interviews (IDI) were conducted with these selected male PWID. Similarly, some spouses of male PWID were contacted (after the consent of the respective PWID) and IDI was conducted with them. The IDI focused on the participants' understanding and attitude towards – risk of HIV spread, access of HIV services, and barriers and facilitators to avail HIV services for the spouses of male PWID. The IDIs were continued till saturation of responses was reached in each of the two groups of participants. The interviews were transcribed and themes from the transcriptions were identified.

FINDINGS

Quantitative component

The median age of the 200 participants was 29.5 years (IQR: 25, 34). About 23% (n=47) were unemployed at the time of the interview. The median age of marriage with their current spouse was 22 years (20, 25). About 33% (n=65) had never disclosed their injecting habit to their spouse. Among those who disclosed their injecting habit, about 24% (n=32) informed their spouse that they have currently quit injecting.

About 78% participants had sexual intercourse with their spouse in the last month; 50% (n=79) of these did not use condoms even once. About 69% (n=137) reported that they have sexual intercourse with their spouse under the influence of alcohol or drugs, while 76% (n=152) reported ever having a sexual partner other than their wives. About 26% reported having extra-marital sex (n=52). About 31% (n=62) had sex with a sex worker. About 6% (n=11) had sex with a partner other than their spouse in the past one month. About 15% (n=29) reported having sex with same-sex partner. About 20% participants (n=39) denied having tested for HIV ever in their lifetime. Among those who reported being tested for HIV (n=161), 15.5% (n=25) reported testing positive for HIV.

About 74% (n=147) participants did not consider their wives to be at risk of HIV. About 35% participants (n=70) reported that their spouses had never tested for HIV, as they 'never felt it to be necessary' (n=31, 44%). Only 35% (n=70) participants reported that their spouse had tested for HIV in the past six months.

Qualitative component

Results from IDI with 11 male IDUs

I am taking precautions – if I am HIV negative, then my wife should also be negative.

Most participants who had tested negative for HIV believed that their wives are not at risk of getting HIV either due to their own behaviour (their HIV negative status, non-sharing/ non-reuse of needles/ syringe/ other paraphilia and using condoms with sex partners other than wife) or due to their wife's 'moral' character. In contrast, those who had tested HIV positive rated their wives contracting HIV as high.

Women can face various barriers in getting themselves tested for HIV

Most participants believed that it is not difficult in terms of access and availability of HIV testing services for spouses. However, there are other factors that make spouse testing challenging. The spouses already face stigma and discrimination on account of their husband's injecting/drug use; HIV will add to their stigma and discrimination. Other family members may discriminate towards the spouses if they test HIV positive. Participants also felt that women do not have time to avail HIV services due to their household chores and that women generally do not prefer/find it difficult to travel alone for their HIV testing.

HIV testing can be encouraged through various avenues

Participants opined that monetary incentive could play a major role in increasing the uptake of HIV services. Having clinics near their residence, using 'Mohalla' clinics operating during afternoon time, having female staff in the clinic, can also help. Stigma and discrimination can be countered by door-to-door visit by Anganwadi workers, or other media such as WhatsApp and YouTube videos that emphasize HIV testing for women can be created and circulated locally.

Results from IDI with 11 spouses of male PWID

Spouses perceive risk for other spouses, but not for themselves

The participants were aware of HIV and the risk of HIV spread through injecting drugs with potentially infected needles. They were also aware of the testing facilities. However, they did not feel that they themselves were at risk as they believed that their husband had stopped injecting. Most were not aware of the current injecting status of their husband. They were not aware of the frequency of HIV tests as well.

Status of spouse in the family hierarchy is a major barrier for HIV services

The spouse has to take care of household chores and hence do not find time for HIV services. Even if they have time, they do not have direct access to resources such as money or mode of travel. Their movement is also controlled by their husbands or her in-laws without whose permission, she cannot get out of her house. Their (husband/in-laws) approval is also required for interacting with TI staff.

Support for husband and children can be a route to facilitate HIV services

Most spouses were concerned about their children's education and future. They were equally concerned about their husband's drug use as well as unemployment. They felt that financial incentives, employment for their husbands, free ration, etc. can entice the spouse of PWID to avail HIV testing services. Female TI staff have also been an important factor that have helped them for HIV services.

CONCLUSIONS

Male PWID indulge in significant unprotected sexual intercourse with their wives. Most participants do not inform their spouse of their current injecting status, have sex under the influence of intoxicating substances, and indulge in various high-risk sexual behaviour. Yet, most neither consider their wives to be at risk of HIV nor had got their spouses tested for HIV. Various reasons for these findings include wrong knowledge, non-disclosure of injecting status to spouse, and fear of stigma and discrimination towards injecting and HIV. Women are also not able to avail HIV services due to various barriers, mainly related to their position in the society and family. However, there are various avenues for improving HIV services which should be explored to increase HIV testing and treatment services in this vulnerable population.

RECOMMENDATIONS

The knowledge levels of PWID regarding HIV needs much improvement. Special focus should be on enhancing knowledge regarding sexual route of HIV transmission, including spread to their wives. HIV services in wives of PWID can be improved through various approaches. These include, for example, offering HIV testing services at local level through Mohalla clinics or through camps for the general community (not focusing on wives of PWID alone), offering incentives (such as free ration or items for schooling of children) to attract spouses of PWID to TI for HIV services, and tweaking the time of HIV testing and treatment services to suit the women. The TI outreach through dedicated female ORW should continue. Additionally, tie-up with local anganwadi workers who have better acceptance in the general community should be tried. Finally, efforts to reduce stigma and discrimination at community level are needed.

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Factors behind High Prevalence of Injecting Drug Users in Karbi Anglong District, Assam – A Mixed Method Approach

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INTRODUCTION

The use of drugs via injection is one of the most hazardous and addictive methods of drug abuse. People who inject drugs are 22 times more likely to get infected with HIV1. Worldwide, an estimated 13.1% of the approximately 11.8 million people who inject drugs are thought to be living with HIV2.

In India, HIV prevalence is concentrated among the high-risk populations3. Surveillance conducted in 2017 covering high-risk groups (HRGs) showed that IDUs are the most affected with HIV/AIDS (6.26 %). Also, HIV prevalence among IDU is almost 28 times higher than the overall adult prevalence4,5.

The prevalence of IDUs in Karbi Anglong, Assam, is a significant concern due to it being a border district and the ready availability of injectable drugs. While there is ample data on HRGs in our country, it is essential to evaluate the underlying factors contributing to the high prevalence of Injecting Drug Users in this region.

OBJECTIVES

To assess the factors behind high prevalence of IDUs in Karbi Anglong district, Assam.

To understand the pattern of drug use by IDUs in Karbi Anglong district, Assam.

To assess the risk behaviour of IDUs in Karbi Anglong district, Assam.

METHODS

The cross-sectional study was conducted between July-October 2022, by the field team. For quantitative data, sample size of 220 IDUs was covered (considering default prevalence at 50%, at 5% CI, and total IDU population was 509). For the qualitative assessment one FGD and 5 KIIs were conducted.

Inclusion Criteria

Any person aged 18 years or more and meet the criteria of an IDU.

Those who gave informed consent.

Exclusion Criteria

Any person aged < 18 years and do not meet the criteria of an IDU.

Those who did not participate in the study.

The required sample was obtained using simple random sampling methods from those IDUs who were availing services from non-TI NGOs at Karbi Anglong, Assam. If a non-response was registered, the next serial number was taken. Before conducting the study, ethical approval was taken from the Institutional Ethics Committee, DMCH. Informed consent was obtained from all the study participants.

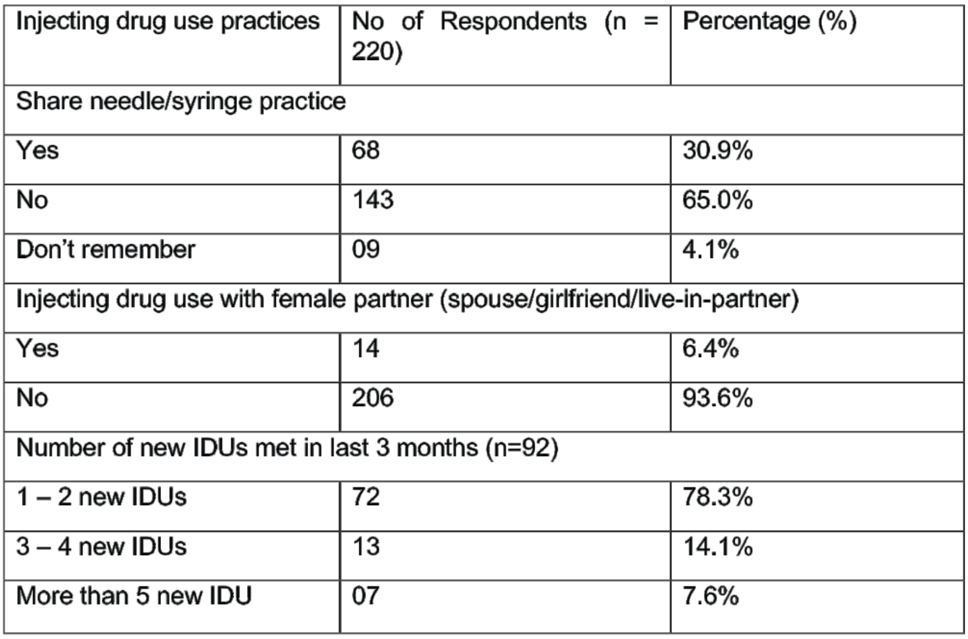
FINDINGS

The current study was taken up based on the background information provided by non-TI NGOs on increasing trends of injecting drug use in Karbi-Anglong district. Most of the IDUs were between the age group of 18 – 25 years (n=116; 52.7%). Majority of IDUs were never married (n=153; 69.5%). Significant number of IDUs studied up to 6th-10th standard (n=105; 47.7%). Statistically, there was a significant association between educational qualification and knowledge about HIV/AIDS (p = .000). However, no significant differences were found between age group of IDUs and knowledge about HIV/AIDS (p = .115). Reported HIV/AIDS positivity in the current study was 4.5%. Most commonly used injecting drugs were Brown Sugar followed by Spasmoproxyvon. For monetary benefit, drug peddlers resorted to peer pressure in bringing in new clients. As such, the most common reasons for drug use were peer pressure, stress in the family, unemployment, wanting to escape from reality, and enjoyment purposes. In cases where IDUs are faced with monetary issues and are unable to afford the required full dosage of drugs, they end up resorting to sharing of needles after using a single syringe for multiple partners.

Table-1: Background Characteristics of Study Participants

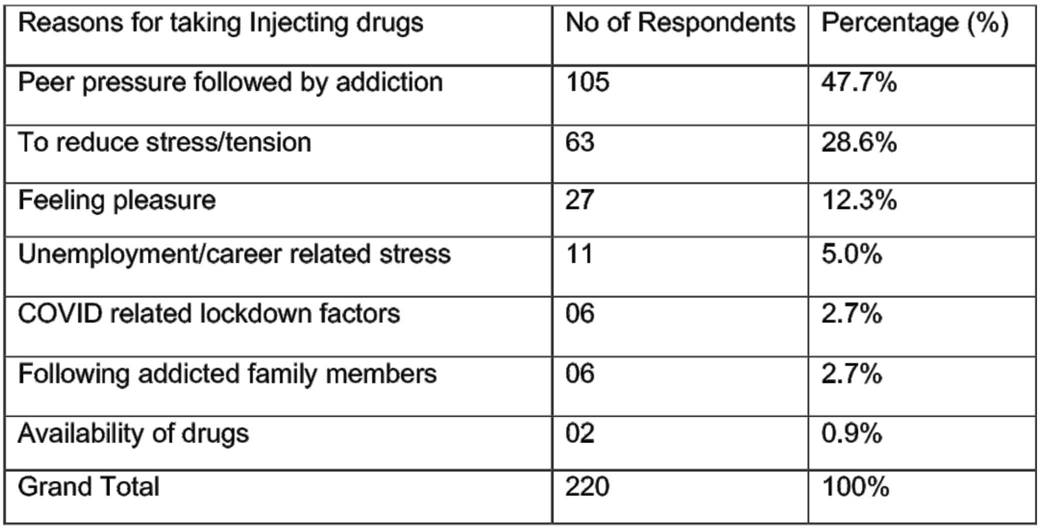
Background Characteristics	No of Respondents (n = 220)	Percentage (%)
Age Group (in completed years)		
18 – 25 years	116	52.7%
26 – 35 years	98	44.5%
36 – 45 years	02	0.9%
46 – 55 years	04	1.8%
56 & above years	-	-
Marital Status		
Never married	153	69.5%
Currently married	59	26.8%
Divorced/Separated/Widower	08	3.6%
Education Level		
Illiterate	02	0.9%
Literate & till 5th standard	34	15.5%
6th to 10th standard	105	47.7%
11th to graduation	79	35.9%
Post-graduation and above	-	-

Table-2: Injecting drug use practices among IDUs



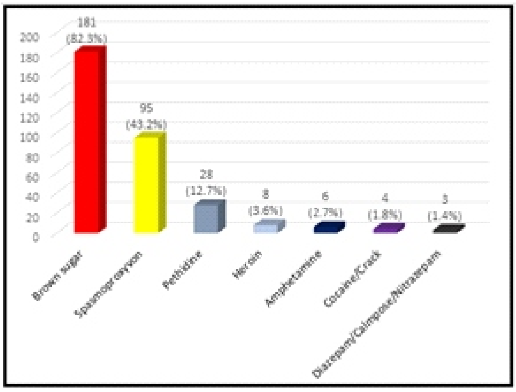
Injecting drug use practices	No of Respondents (n = 220)	Percentage (%)
Share needle/syringe practice		
Yes	68	30.9%
No	143	65.0%
Don't remember	09	4.1%
Injecting drug use with female partner (spouse/girlfriend/live-in-partner)		
Yes	14	6.4%
No	206	93.6%
Number of new IDUs met in last 3 months (n=92)		
1 – 2 new IDUs	72	78.3%
3 – 4 new IDUs	13	14.1%
More than 5 new IDU	07	7.6%

Table-3: Reasons for injecting drug use by IDUs



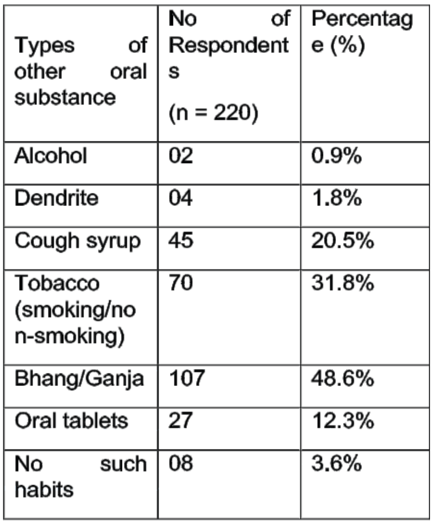
Reasons for taking Injecting drugs	No of Respondents	Percentage (%)
Peer pressure followed by addiction	105	47.7%
To reduce stress/tension	63	28.6%
Feeling pleasure	27	12.3%
Unemployment/career related stress	11	5.0%
COVID related lockdown factors	06	2.7%
Following addicted family members	06	2.7%
Availability of drugs	02	0.9%
Grand Total	220	100%

Fig 1: Types of Injecting Drugs used by IDU



NOTE: Multiple response

Table 4: Other Oral substances used by IDU



Types of other oral substance	No of Respondents (n = 220)	Percentage (%)
Alcohol	02	0.9%
Dendrite	04	1.8%
Cough syrup	45	20.5%
Tobacco (smoking/non-smoking)	70	31.8%
Bhang/Ganja	107	48.6%
Oral tablets	27	12.3%
No such habits	08	3.6%

Table 5: Sexual behavior and condom use among IDUs

Practice of IDUs	No of Respondents (n = 220)	Percentage (%)
Exposer to Sexual Intercourse		
Yes	201	91.4%
No	19	8.6%
Use of condom during last sexual intercourse		
Yes	136	67.7%
No	60	29.8%
Don't remember	05	2.5%
Sexual partner of IDUs		
Regular female partner	152	75.6%
Commercial female partner	25	12.4%
Casual partner	21	10.4%
Male partner	02	1.0%
Hijra/transgender partner	01	0.5%

Fig 2: HIV Positivity Status of IDUs.

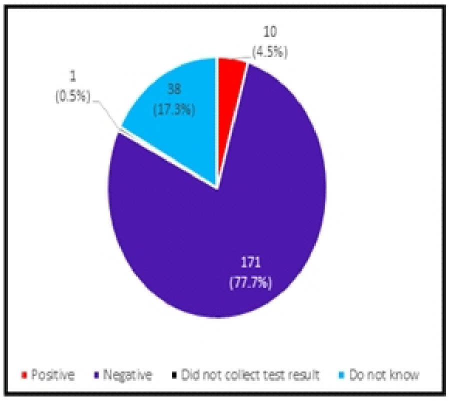
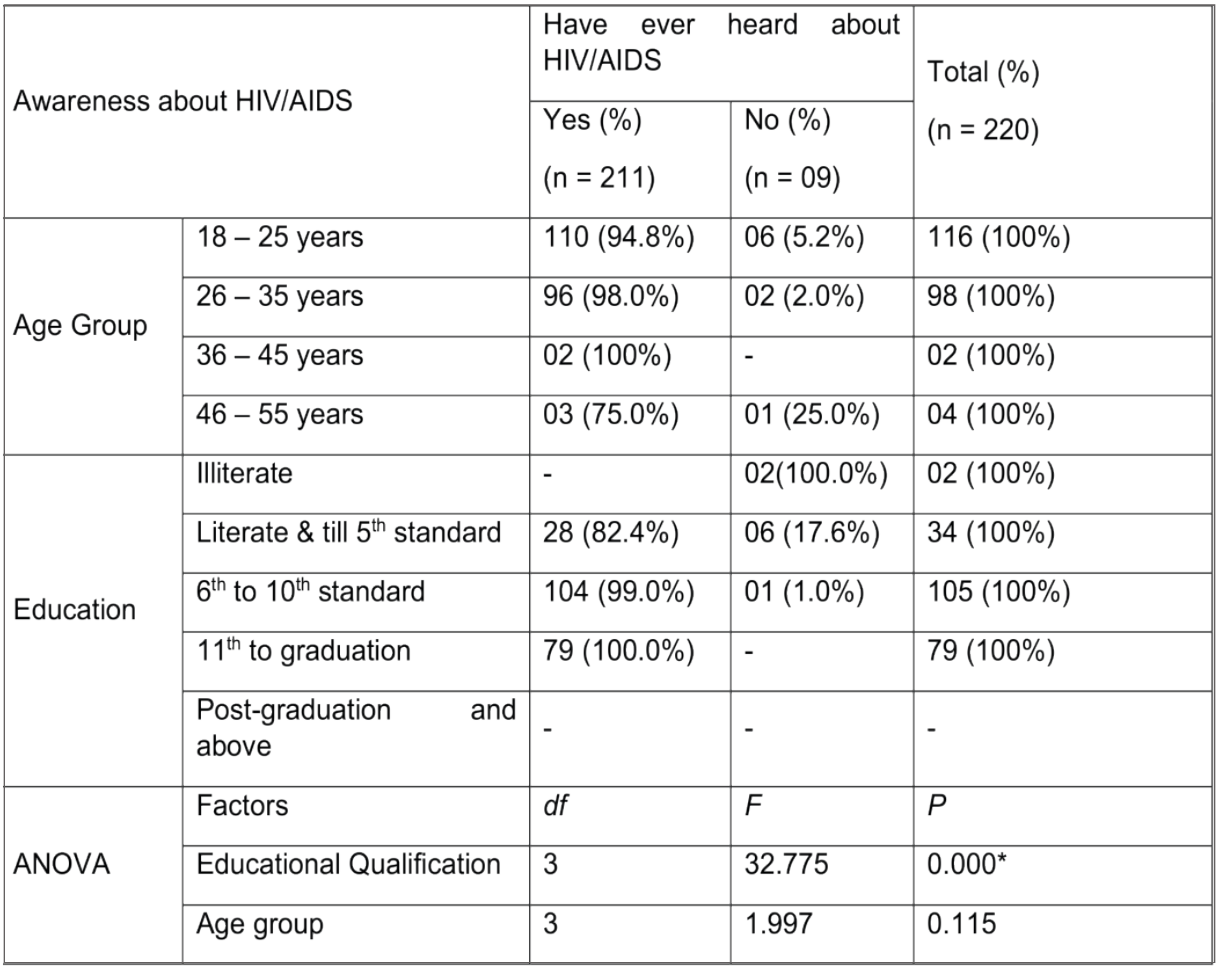


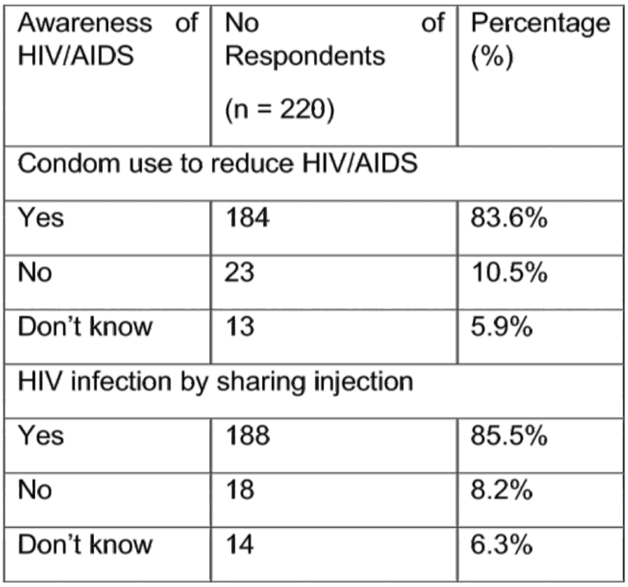
Table 6: IDU Who Heard About HIV/AIDS along with Factors of Education & Age Group (ANOVA)



Awareness about HIV/AIDS		Have ever heard about HIV/AIDS		Total (%) (n = 220)
		Yes (%) (n = 211)	No (%) (n = 09)	
Age Group	18 – 25 years	110 (94.8%)	06 (5.2%)	116 (100%)
	26 – 35 years	96 (98.0%)	02 (2.0%)	98 (100%)
	36 – 45 years	02 (100%)	-	02 (100%)
	46 – 55 years	03 (75.0%)	01 (25.0%)	04 (100%)
Education	Illiterate	-	02(100.0%)	02 (100%)
	Literate & till 5th standard	28 (82.4%)	06 (17.6%)	34 (100%)
	6th to 10th standard	104 (99.0%)	01 (1.0%)	105 (100%)
	11th to graduation	79 (100.0%)	-	79 (100%)
	Post-graduation and above	-	-	-
ANOVA	Factors	*df*	*F*	*P*
	Educational Qualification	3	32.775	0.000*
	Age group	3	1.997	0.115

NOTE: * = significant at 95% confidence level

Table 7: Awareness of Respondents about HIV/AIDS



Awareness of HIV/AIDS	No of Respondents (n = 220)	Percentage (%)
Condom use to reduce HIV/AIDS		
Yes	184	83.6%
No	23	10.5%
Don't know	13	5.9%
HIV infection by sharing injection		
Yes	188	85.5%
No	18	8.2%
Don't know	14	6.3%

CONCLUSIONS

Peer pressure, stress, unemployment, escape from reality and recreation were the major reasons for new injecting drug users to indulge themselves in drug use. Drug peddler or group leader/middleman was the main driving force for attracting new IDUs. Although adequate knowledge was demonstrated by IDUs, still majority of them shares needle. High positivity amongst IDUs remains a priority concern.

RECOMMENDATIONS

- Appropriate behavioural change communication may be adopted to minimize needle sharing practices.
- Context specific programme approach and legal counselling may be adopted by the policy maker to mitigate the problem of injecting drug use.

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Barriers to access Opioid Substitution Therapy (OST) among Injecting Drug Users (IDU) in Chandigarh: A mixed method study

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INTRODUCTION

WHO defines substance abuse as the harmful or hazardous use of psychoactive substances including alcohol and illicit drugs. Opioid substances can be taken through the IV (intravenous) route and non-intravenous route. There are 11.9 million injectable drug users (IDUs) worldwide, according to United Nations Office on Drugs and Crime (UNODC,2022). OST is administered sublingually and is a component of DOTS (Directly Observable Treatment Strategy). It is part of a harm reduction strategy and has proven to be a preventive tool for HIV prevention among injectable drug users. The implementation of OST in India has undergone three broad phases: “contemplation,” “preparation,” and “action” phases. National AIDS Prevention and Control Policy (NAPCP), 2002, also supports the harm reduction technique. It uses a 'targeted intervention (TI)' approach for HIV prevention among all HRGs, including IDUs. According to Opioid Substitution Therapy under National AIDS Control Programme, the TI projects are implemented by Non-Governmental Organizations (NGOs) that can reach out to HRGs much more efficiently as compared to the traditional service delivery systems

Chandigarh is bordered by the State of Punjab to the north, west, and south, and by the State of Haryana to the east with proximity to Himachal Pradesh. HIV prevalence in Chandigarh is 0.19%, while it is 0.21% nationally. Interestingly, the HIV prevalence in the surrounding states of, Punjab, and Haryana is 0.28% and 0.22%, respectively, which is higher than the national average. Chandigarh's location is special in this regard and hence the successful reach of the OST program is important. But, in due course, several challenges have come up. These challenges are both at the structural and individual levels, and it is essential to overcome OST programme hurdles here to fulfil NACO's mission to stop the spread of HIV in India.

OBJECTIVES

Assess the gaps and barriers in the accessibility of the OST services of LFU cases

Assess the motivating factors for the regular intake of OST

METHODS

The present study was conducted in four OST centers of the two TIs being implemented in Chandigarh. The OST centers are functional in the areas of Ramdarbar, Manimajra, Dadumajra and Sector 56, Chandigarh. The study was ethically reviewed and approved by Institutional Ethics Committee, Panjab University, Chandigarh. Participation in the study was voluntary, confidential, and anonymous and no financial compensation was given for the participants' time and transportation related costs. Written informed consent was sought from all the participants prior to data collection. Concurrent Mixed Method (Quantitative and Qualitative) approach was used to assess the barriers for Opioid Substitution Therapy (OST) among injecting drug users. Semi-structured questionnaire, Focus Group Discussions (FGD), and In-depth interviews (IDIs) were also used to attain a broad range of information-rich perspectives. Convenience and purposeful sampling were used for recruitment. 104 (20%) of the 516 regular clients enrolled in targeted intervention projects implemented by Chandigarh State AIDS Control Society were included as the study population. Only 81 IDUs (41 regular and 40 loss to follow up (LFU) cases) could be contacted from the 4 OST centers. Two FGDs were conducted with the LFU cases. In-depth interviews were conducted with the medical officer and OST staff.

FINDINGS

Only 81 IDUs (41 regular and 40 loss to follow up (LFU) cases) could be contacted from the 4 OST centers. 56.8% of them are in the age of 26 to 30 years, followed by 30.9% under 25 years. In this study, 44.4% of respondents were self-employed, 35.8% work in the service industry, and remaining 13.6% are unemployed. The majority of participants (93.8%) live with their families. Majority of respondents (71.6%) have not travelled out of Chandigarh in the last 30 days from the date of conducting the survey. A significant number of IDUs (46.9%) are not currently injecting drugs.

95.1% of IDUs are registered and receiving OST, while only a small percentage (4.9%) are not registered for it. The most commonly administered starting dose of OST among the surveyed individuals is 6mg (27.2%), followed by 4mg (24.7%) and 8mg (23.5%). Among the patients taking injectables, the majority (24.7%) were receiving 3 to 4 injectables per day. 66.7% of respondents indicating that time was an important and comfortable consideration to take OST. 65.4% of respondents indicated that the influence of OST determined their decision to participate in the program.

91.4% of respondents cited the attitude of healthcare providers being good with them and it being a factor influencing their decision to participate in OST. Good health conditions, no craving for drugs, increased self- esteem, good relations with family, increased productivity at work, respect in society, have been identified as important facilitating factors for OST. Time of OST, inadequate dose of OST, social stigma, easy access to drugs, lack of self-esteem, peer pressure, ineffectiveness of OST, and low motivation, are the important barriers in accessing OST.

CONCLUSIONS

The study revealed the positive effects of OST, such as reduced drug use and criminal activities, improved family relationships, and enhanced overall quality of life. However, certain barriers to OST adherence were identified, including inadequate medication dosages and various socio- economic factors. The study emphasized the importance of addressing these barriers to improve client retention in OST programs. Additionally, limited scope of current programs, particularly in terms of addressing individual needs and providing psychosocial interventions, was identified as a contributing factor to low compliance rates.

RECOMMENDATIONS

There should be flexible time of OST dispensing for those who are working. More focus should be given to improve the retention rate of the IDUs. There should be proper coordination with the various stakeholders of OST programs in the tri-city area so that proper synergy is maintained. A comprehensive strategy to stop the misuse and diversion of OST medicine. Time to time counselling sessions can be organized for IDUs /LFUs for their self-motivation. These barriers can significantly impact the ability of IDUs in Chandigarh to retain OST. Addressing these issues will require a multi-faceted approach that involves providing education, reducing stigma, increasing the availability and accessibility of treatment, and involving community members in the process.

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Impact of Opioid Substitution Therapy on Injecting Drug Users in Jammu

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INTRODUCTION

After the National AIDS Control Program (NACP) incorporated Opioid Substitution Therapy (OST)[1], there have been many OST centers in India, with appropriate practice guidelines, standard operating procedures, and capacity-building mechanisms for effective OST implementation. Drug addiction is a major problem in many Indian states, with the youth exploring newer drug varieties. In the union territory of Jammu and Kashmir, there are reports of opioid use even in far-flung areas, with reported arrests of the users, exposing them to the risk of HIV transmission. The OST program was launched by National AIDS Control Organisation (NACO), in collaboration with various state counterparts to deal with the vulnerabilities of opioid use in the general population.

OBJECTIVES

The study was undertaken with the following objectives:

To study the impact of OST program on IDU in Jammu District of Jammu and Kashmir

To understand the challenges in implementation of OST program in Jammu

To devise strategies and recommendations to strengthen the OST program

METHODS

The present study used a mixed method approach and a descriptive research design to study the impact and challenges of OST on Injecting Drug Users (IDU's) in Jammu district of the Union Territory of Jammu and Kashmir. Quantitative methodology has been used in undertaking this study. The study uses a well-developed schedule to collect data from the IDU's who have been registered in the OST centre along with open-ended interviews of human resources engaged in delivering the services to beneficiaries of the

[*] *In OST, Opioid-dependent injecting drug users are provided with long-acting opioids against medications for a long period of time under medical supervision along with psycho-social interventions*

program, and the administrative personnel. The interview schedule was drafted to capture various dimensions like socio-economic and demographic profile, drug usage history and the changes experienced by the client post OST. The tool also captured the self-analysis of the OST program by theusers. The sampling included two categories of respondents -the IDUs, and service delivery personnel, who were selected through simple random sampling and purposive sampling respectively.

FINDINGS

The research study has brought forth interesting findings which are as follows:

Injecting Drug Users (IDU's) availing the services of OST belong to different backgrounds in terms of education, employment and marital status. IDUs belonging to the age group 20-40 years, are the most vulnerable to drugs, with the mean age of those surveyed being 30 years. Increased educational attainment also built a larger peer group which acts as an influential factor in substance abuse. With more educational exposure, it is not only the expansion at peer level, but young adults also become more independent and enhance their social expansion within the family functioning model.

Most of the OST users were engaged in low paying jobs. With an average monthly income of Rs. 13427, majority (i.e., 68% as Std. Dev 1) of OST users earned between Rs.7000- Rs.20000. With daily average spending of Rs. 677 on drugs. It was noted that before joining the OST centre, their whole incomes were spent on drugs.

99% of OST users used to inject drugs along with their peers and 90% were injecting drugs more than once per day. Needle sharing was a common practice and hence, OST can be a suitable alternative in contributing to harm reduction.

83.8% of IDUs did not approach anyone to seek professional help, which shows the need of strengthening and enhancing the penetration of TI centres.

The study observed that engagement in OST led to a better lifestyle, with participation in activities such as walking/running or other recreational activities.

80% of OST users enjoyed outing with the family after joining the OST, which indicates a functional family revival post their use of OST services.

Study revealed that the opinions of IDUs who are using OST services get now valued within their respective families. Their restored image is surely a positive outcome of the therapy and can be considered as a good indicator to measure the impact of the therapy.

Study also explored the motivation of the OST users and observed that 97% of them would like to continue with the therapy. Study also revealed that to a greater extent of OST, generated hope among the OST users who were regular to the therapy (i.e., 99 out of 130). 71% of the respondents were leading a functional life (See Figure 5.14 in the report) which further motivated them to be regular with the therapy.

The study also discovered that personnel engaged in service delivery are regularly getting the demand for take home medicine by some of the users which is being strongly monitored by the staff.

CONCLUSIONS

Jammu and Kashmir, with its major share of bearing drug trafficking, has recently seen the transformation of the capital city to a prime hub of drug-related activities. Use of Opioids over period of time has become a grave concern, with sprouting hotspots frequented by young population. With increasing criminal activities involving drug users, there are reports of various cases of thefts and other illegal activities among drug users. This has led to further stigmatization of drug users and calls for a strong OST program, as a harm reduction strategy.

RECOMMENDATIONS

- Keeping in view the positive impact of OST on the IDU's, there is an urgent need to open new OST centres in expanding reach and wider usage, along with reducing the burden on the existing centre.
- It is recommended that independent OST centres be established in different locations beyond medical colleges or hospitals. In this regard, NGOs can become partners in expansion and strengthening the OST program.
- Enhancing the manpower in the current OST centres is also recommended to ensure year-round functionality.
- A thorough coordination between OST and TI centres need to be established in a more robust way in attaining a real time assessment of harm reduction which can then be monitored
- Success stories to be documented and promoted by calling upon the users who have shown remarkable improvement in their behaviour

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Barriers to OST initiation and retention among people with opioid dependence in Manipur: A qualitative study

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INTRODUCTION

As HIV is a high-risk factor among injecting drug users, harm reduction strategy is integrated in many medical institutions and other related centres in order to reduce or minimise its transmission. Among the many strategies, Opioid Substitution Therapy (OST) is widely adopted in various parts of the world, including Manipur. It highly benefits opioid dependent persons, Injecting Drug Users (IDU's) and other substance users, by replacing their daily dosage of illicit drugs by medically prescribed drugs, namely Buprenorphine (sublingual) and Methadone (liquid). It also facilitates in reducing high risk factor diseases other than HIV such as Hepatitis B, C, and other blood borne diseases. It also integrates in changing individuals' behaviour towards society and improving their overall quality of life. The study is conducted solely on the opioid dependent people who are currently initiated on OST including opioid users not in treatment, drop-outs and service providers from various OST centres in Manipur.

OBJECTIVES

Assess OST implementation and barriers faced by both treated and untreated individuals.

Explore service providers' experiences in facilitating and improving OST services.

METHODS

The study is qualitative in nature. The method of collecting information for the study was done using unstructured interviews with open ended questions that provided in-depth information. Participants of the study were selected randomly from few OST centres on the basis of purposive sampling technique that included two subgroups of opioid dependent persons – a) currently in treatment and b) those who are currently not on treatment. Moreover, key informants, service providers and few drop-outs were also included in the study. Information was recorded using tape recorders after consent of each participant. Participants were approached from different OST centres namely RIMS (DTC), NIRVANA (FIDU) and SASO.

FINDINGS

Data was collected from a total of 68 respondents/participants from different groups. Of these, 42 respondents were on OST, 14 respondents from the dropped-out group, and another 12 participants from key informants and service providers.

Many participants expressed positive and negative views on OST. One participant expressed his opinions by stating that,

“Before using OST, there used to be a lot of crisis at home, domestic fights, financial issues and a chaos filled house with no peace whatsoever. Though it was not the case of stealing goods, but due to lack of money and the need for them regarding using the drugs being a priority, there were moments of immense crisis at home added to mental distress. But ever since they came to the treatment centre and started OST, there was no more aggression and fights, discussions were held in peace with everyone including their near and dear ones”.

Another factor found in the study relates to social stigma and negative perception especially among female drug users. A female participant expressed that they couldn't come out freely to register in treatment centres compared to male drug users as they were already mistreated for consuming drugs as a female in the society.

“Being a woman, even going to pharmacy to get a syringe, was met with immense stigma. So, it's really hard to go out from the house even”.

Alternatively, among few participants shared that they received medicine for detoxing at home under the guidance of treatment centre without registering. In some cases, participants addressed that even when their families were aware of their positive behavioural changes in taking the treatment, they still hesitate to show support openly in front of relatives or locality members because they viewed OST centre negatively.

Peer pressure and Psychological urge can be considered as a twin factor among the various problems addressed by participants who dropped out from using OST.

One participant mentioned “Even though OST is useful, I cannot continue taking them when I meet my fellow drug users, even when I don't go out they would reach for me and there's always a sudden urge when I met them. I would forget about OST and decided to take later again”

Another participant said “I couldn't control my mental urge to retake drugs when I see my fellow drug users even at those times when I was taking treatment”.

Furthermore, some participants shared that they were unable to take their medicine back again when they relapsed because they felt shameful and encountered unfriendly staff and counsellors.

As narrated by a participant, “Yes, I used to visit for 2-3times a week for counselling however, when I went back to the centre after I relapsed in between, the staff told me that my name was cut off from the registration list and had to be registered newly. Since then, I stopped going back to the centre and went to another new centre from which I am continuing OST treatment till date...”.

Barriers faced by current OST users

- Difficulty in commuting to centres
- Long distance from residence
- Financial constraints for daily travel

- Time inflexibility of OST centre
- Not able to come on fixed timings due to work and other reasons
- Social Stigma and negative perception from general public and family members
- Inaccurate dosing, due to which they are not able to meet opioid needs
- Peer pressure, craving affecting motivation
- Lack of counselling and guidance from service providers

Barriers faced by drop outs

- Internal factors (individual factors)
- Poor motivation
- Cravings
- Psychological issues like anxiety, depression
- Negative views about effectiveness of OST
- Lack of knowledge about OST

External factors

- Peer pressure from current drug abuser
- Lack of accurate dosing
- Lack of monitoring home take dose
- Lack of proper counselling and psycho education
- Difficulty in commuting and time flexibility
- Transferring from one centre to another

Refusal to take OST

- Lack of knowledge about OST centres
- Poor motivation
- Attitude of OST centre staffs

Barriers faced by service providers

- Lack of understanding of client needs
- Lack of client motivation to continue OST
- Lack of adequate number of trained staffs and counsellors in the centre
- Lack of awareness about OST among clients
- Need for recreational space to encourage client participation

This study primarily aims to investigate the obstacles associated with both the initiation and sustained use of OST. Therefore, the gathered data has been predominantly analysed to uncover the underlying factors contributing to these challenges. Participants who were under OST treatment were willingly taking regular doses and attending counselling sessions under the strict supervision of family members, saw improvements in their health and behaviour. This led to better working abilities, financial conditions and lifestyle as compared to those participants not taking OST or who had stopped in between as a result of unsupportive family members and peer pressure which may have led to their relapse.

Travelling issues which emerge centres being at distance locations eventually lead to clients being unable to arrive within the allotted time slots at the centre.; This eventually leads to the clients being unable to receive their daily dose (mostly in case of Methadone) making them more anxious if not present or unable to arrive within the allotted timings at the centre.

Social stigma surrounding family members, relatives and fear of identity exposure are other factors leading to patient apprehension in registering for proper treatment. Despite being aware of their behavioural changes, the family members sometimes do not support them due to dear of ostracization from the rest of society. These issues are mostly seen among female drug users.

Inadequate dose and lack of monitoring by service providers during initial days of dose induction process, absence of medical experts on certain days at certain NGO centres and improper initiation of takeaway doses worsen their withdrawal conditions leading to more drug craving and eventual relapsing.

Misconceptions and limited knowledge of OST among drug users discouraged them from benefitting from its effective use instead using them as a substitute solely in times of lack of illicit drug supply.

Fear of medical side effects from long term use on OST is one common treatment misconception among the OST users which need to be addressed by service providers.

Improper counselling at some centres such as lack of follow-up records, psycho-social counselling records, poor body language, and judgement towards patients, prevented them from regular revisits to the centre. Focusing only on abstinence goal without understanding background of clients or implementing the right motives of treatment highly influenced OST users to suddenly drop out.

A significant statement among the interviews given by service providers was “What is after OST?” When a drug user gets better after initiating OST physically and mentally, they need to engage in work or activities to help them in reintegrating with the general population and make use of their overall behavioural change. They further explained that most OST users missed out on achieving basic required educational qualifications while relying on drugs, making it difficult for them in finding employment later. Moreover, service providers provided their suggestions and opinions on implementing various programmes, trainings, and schemes as a part of OST programme that could provide a room to enhance their skills for better outcome of the treatment.

Many service providers emphasize the importance of establishing recreational spaces within treatment centers. They believe that this approach can effectively engage drug users in the process of initiating OST and offer them an opportunity to grasp harm reduction practices, instead of resorting to drug use and wandering the streets.

CONCLUSIONS

The participants who were on OST regularly expressed significant positive changes in their life allowing them to be productive members of society. However, the study uncovers persistent issues such as long commute times to OST centres, adherence to pre-determined time slots, poor counselling techniques, persistent negative perception, and social stigma, were found to be some of the important factors hindering the process of OST initiation and retention. Client factors like peer pressure and psychological urge to reuse drugs as a result of addiction, were important factors. Service providers expressed the need for recruiting more trained staff and counsellors for better implementation of services.

RECOMMENDATIONS

- Expand services to remote areas or optimize locations for improved accessibility, addressing transportation challenges.
- Provide flexibility in dose dispensing schedules at the centers.
- Increase the recruitment of skilled counsellors and staff to facilitate regular counseling sessions and effective monitoring at each centre.
- Implement awareness programs at the grassroots level, targeting local clubs and communities, to combat negative perceptions and stigma associated with OST and address client misconceptions.
- Integrate recreational spaces into the OST program at each centre to encourage client engagement.

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Quality of Life among Female Injecting Drug Users (FIDU) in Opioid Substitution Treatment (OST) of Manipur

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INTRODUCTION

India is situated between the two largest illicit opium-producing regions of the world – “Golden Crescent” and “Golden Triangle”. This makes it vulnerable to being both a destination and transit route for opioids (United Nation Office on Drugs and Crime, 2005). Besides, India itself is one of the largest legal producers of opium. Not surprisingly, India has had an established pattern of use of opioid group of drugs. Indeed, a sizable number of people in India use opioid drugs, suffer from opioid dependence and seek treatment for the same.

People who inject drugs comprise a stigmatized population. Even more marginalized among them are women who use drugs and inject drugs, forcing this sub population to remain hidden. As a consequence of discrimination faced by society, this invisible population of women face serious threats to their health, safety and wellbeing. Current programmes are aimed at improving the health of female injecting drug users, involved in Opioid Substitution Therapy (OST) programme. The first step towards addressing this gap is to explore the changes in quality of life among female drug users and understand the various factors related to substance abuse among women. There is a paucity of literature related to drug use among women in India as well as in Manipur and the available data indicates the emerging nature of the problem. A rapid assessment study conducted in India during 2000–2001 found that 8%t of the 4,648 people who used drugs recruited from the community across 14 cities were women and the drugs they used included heroin and pharmaceutical opioids; among women recruited from Imphal, about three fourths were injecting drugs (Kumar, 2002; Kumar & Sharma, 2008). It has been encouraged from the previous studies to identify change in quality of life among female IDUs participating in the OST programme.

OBJECTIVES

Examine the personal development, mental distress, material well-being, and experiences of discrimination among FIDU in Manipur.

Investigate factors contributing to drug use, patterns of drug use, and types of drugs used within the same population.

Provide valuable insights for psychologists, psychiatrists, stakeholders, and policymakers to develop and implement effective programs and strategies aimed at improving the lives and futures of FIDU.

METHODS

A cross-sectional study design was adopted for collecting data from different individuals at a single point in time. A sample of 57 registered female injecting drug users who participated in OST programme were recruited through the stratified random sampling method. Total number of FIDU registered in OST centre at Imphal east and Imphal west districts of Manipur i.e., NIRVANA and MLSS, were considered a sampling frame of the study. The names of the prospective individuals in the sampling frame were listed. These prospective individuals were divided into two strata i.e., Imphal west and Imphal east OST centre. From these stratum, 57 samples were drawn through simple random sampling technique. The study variables included quality of life and various socio-demographic and other drug related variables such as age of the respondents, educational status, marital status, type of family, age of initiation of drug use, duration of drug use, source of income, etc. Before conducting the study, necessary permission was taken from the concerned authority and they were informed about the nature of the study that the research.

Informed consent was taken from the participants and they were also guaranteed that their confidentiality would be maintained. Tools such as semi structured performa consisting of the socio demographic and other relevant details of the participants and opioid substitution treatment quality of life scale (OSTQOL) (Strada, et al., 2017) for measuring the quality of life of FIDU in six different areas were administered. Pearson's chi-square test and fisher exact test were used to find an association between categorical data from contingency table. Independence sample t-test was calculated for two mean groups. Correlation coefficient was calculated to find out any relationship between two or more variables. All comparisons were two-sided and the P value equal to or less than 0.05 was considered as statistically significant. All the analysis was performed in the SPSS software (version 25.0).

FINDINGS

The current study was based on the primary samples of 57 registered female injecting drug users participating in the OST programme. The samples were recruited from OST centres at Imphal east (NIRVANA) and Imphal west (MLSS) districts of Manipur. There were four sections in the current study.

Basic profiles of female IDUs of Manipur

47 % of the female IDUs of Manipur were illiterate and a majority of them were rural inhabitants (88%). Their religious background was mainly Christian and Hindu with 47% and 39% respectively.

Sex work (48%) was found to be the main source of income for them. Most of them belonged to nuclear families (74%). In case of marital status, 37% of them were separated, and 18% were widowed. A majority of them were living with family and children (53%). With regard to age of initiation of drug use, 23% of them started using drugs during adolescence.

33% stated the reason for starting opioid use as peer pressure. Most residences of female IDUs participating in the OST programme were within a 1 km radius (63%) from the OST centre. Only 21% of them wanted to quit the OST programme and 7% of them were taking other drugs along with OST. In case of hepatitis C status, 11% of them were found positive and 43% of them were not tested. 18% of the participants has tested positive for HIV.

Quality of life of Female Injecting Drug Users in Opioid substitution treatment

With regard to personal development, it was found that 88% of female IDUs were having average and high level of personal development. In case of mental distress, 82% of them were having average level of mental distress. With respect to social contact, 83% of them were having average and high levels of social contact. Regarding material wellbeing, 88% of them were having average and high levels of material wellbeing. About participation in opioid substitution treatment programme, 93% of them eagerly wanted to partake in the OST programme. With regard to discrimination, 81% of them were facing certain levels of discrimination. Most declared that participating in the OST programme reduced discrimination in work place, hospital and in their own house.

The present study declared that no association was found between six identified dimensions of quality of life and OST adherence of female IDUs. The finding revealed that whether the female IDUs were adherent or not adherent to OST, no difference was seen in their quality of life.

Drug retention rate of Female Injecting Drug Users in Opioid substitution treatment

The current study reported that 74% of FIDU in Manipur had a consistently high level of retention in OST, while an additional 16% maintained a regular level of retention.

Socio-demographic factors such as age of respondents and place of residence were found to have an association between drug retention rate of female IDUs. The finding declared that drug retention rate of female IDUs were higher among middle adult and urban inhabitants when compared to young adult and rural inhabitants, respectively. However, other socio-demographic and relevant factors such as educational qualification, religion, types of family, marital status, hepatitis C status, and HIV status, were not found to have an association with respect to drug retention rates of female IDUs.

Factors associated with adherence to Opioid substitution treatment in Female IDUs

The current study finds that OST adherence was found higher among middle-aged adults female IDUs, urban inhabitants and female IDUs whose houses were nearer to OST centre when compared to their counterparts i.e., younger adult female IDUs, rural inhabitants and female IDUs whose house was far away from OST centre, respectively. However, other factors such as educational qualification, religion, types of family, marital status, source of income, age of initiation of drug use, reason for starting of opioid use, duration of participation in OST programme, hepatitis C status, and HIV status, were not found to have an association with respect to OST adherence.

CONCLUSIONS

Drug-using women are stigmatised, and as a result of societal discrimination, this unacknowledged group of women are faced with grave risks to their health, safety, and well-being. The majority of female IDUs were illiterate, and most of them lived in rural areas. They started using drugs at a young age and it was discovered that sex work was their primary source of revenue. 11% of them tested positive for hepatitis C, and 18% tested positive for HIV. The current study asserts that female injecting drug users who participated in an opioid substitution treatment programme experienced improved quality of life. Inhabitants who are middle-aged and live in cities had higher rates of drug retention.

RECOMMENDATIONS

The present study is one among the few studies to describe the quality of life among female injecting drug users (FIDU) in opioid substitution treatment (OST) of Manipur. The findings might be helpful for state level policymakers, stakeholders and programme planners to design suitable strategies in the context of managing health care of female IDUs of Manipur. Important initiatives for generating income and social protection programmes for female IDUs, especially for those involved in sex work, are needed.

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Understanding the Reasons for Registered Injecting and Oral Drug Users to Simultaneously Inject Drugs and Take Oral Substitution Therapy in Meghalaya

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INTRODUCTION

Around 269 million people used drugs worldwide in 2018, which is 30% more than in 2009, while over 35 million people suffer from drug use disorders, according to the latest World Drug Report of 2020. Alcohol is the most common psychoactive substance used by Indians. After alcohol, cannabis and opioids are the next commonly used substances in India. Meghalaya, a state situated in the north eastern region of the country with a population of over 3.27 million has 12 districts. The state is largely (86%) inhabited by tribal people, Khasi, Jaiñtia and Garo (Census, 2011). Illicit drug use is increasing in Meghalaya in recent years. According to the Director General of Police, Meghalaya, there are approximately 250,000 drug users including injectable drugs and psychotropic substance users in the state. Due to the close proximity to the golden triangle, Meghalaya has become a major transit point for drug trafficking and this has put the authorities on very high alert to tackle this grave concern. A news report has reported that there is also an increase in the number of female drug users in the capital Shillong between the age group of 15-16 years (The Sentinel, July 17, 2022). The reasons are mainly due to family problems and peer pressure. Earlier, the state capital used to be the transit route for drugs, but now, drugs have become easily available and accessible. It has been reported through MACS that OST clients are also taking other drugs like alcohol, Ganja, heroin, etc. Therefore, there is a need to understand the reasons for this simultaneous use of OST along with injecting or taking oral drugs.

OBJECTIVES

To understand the reasons for the simultaneous use of OST and other drugs by IDUs in the state,

To assess the perceived benefits of OST and to determine the uptake of services as provided at the OST centres.

METHODS

The study was conducted in three districts of Meghalaya, specifically East Khasi Hills, West Jaiñtia Hills, and East Jaiñtia Hills. A qualitative research design was employed which involved conducting in-depth interviews with various respondents from five OST (Opioid Substitution Therapy) centers across the districts. Prior to data collection, relevant structured interview schedules and guides were developed and piloted. The interviews took place at the OST centers, and the primary language used during the interviews were the local Khasi and Jaiñtia languages. However, some interviews were also conducted in English and Hindi. The study included a total of 128 OST clients, with 50 from East Khasi Hills, 42 from West Jaiñtia Hills, and 36 from East Jaiñtia Hills. Among the clients, there were 11 female OST users. Additionally, interviews were conducted with at least 12 Peer Educators, 2 Counsellors, and 3 Project Managers who were involved in implementing the OST program. This diverse set of interviews aimed to provide a comprehensive perspective on the topic. To facilitate analysis, the interviews conducted in local languages were transcribed and then translated into English. Braun and Clarke thematic analysis framework was then performed on the translated data to identify the codes, after which, the categories and themes were analysed

FINDINGS

Four broad themes emerged from the interviews which are as follows: 1. Drug use Initiation 2. Factors for the simultaneous use of OST and drug use among registered injecting and oral drug users. 3. Perceived benefits of OST and 4. Service uptake. A large majority of the clients were male with more than half (54%) unmarried. The mean age of the clients was 30 years (SD+8.5). The educational attainment is quite low with a majority of clients having completed only upper primary, secondary and higher secondary education. The majority of clients reported their first experience with drug use occurring during the age range of 15-17 years. Over one third (37%) of the clients started using drugs below the age of 17. The main factors that influenced the respondents to initiate drugs were their curiosity and want to experiment, family issues, peer pressure, and drugs being used as stress busters. The popular drugs taken were weed, cocaine, heroin, nitro, spasmo-proxyvon, nitrazepam, and alprazolam. The modes of taking drugs are varied; weed was usually smoked and tablets were usually ingested while heroin was sniffed or injected with a syringe. The average amount spent on drugs ranged from ₹ 500.0 to ₹. 2500.00 per day. With drugs being easily available; markets and drug peddlers were usually the point of access to these substances.

The respondents who have been registered in the OST centres have done so, only after a few years of taking drugs. This gap in years ranged from 5, 8, and 4 years in East Khasi Hills Districts, West Jaiñtia Hills Districts and East Jaiñtia Hills Districts respectively. It was observed that 55% came to take OST daily and the remaining 45% respondents visited the centre either once or twice a week to take OST. The percentage of respondents who were using drugs simultaneously with OST were 22% in East Khasi Hills, 33% in West Jaiñtia Hills, and 25% in East Jaiñtia Hills. The factors that influenced the respondents to take drugs along with the OST medication are many. They include wanting to reduce the ill effects of the withdrawal symptoms, craving for the feeling of 'high', irregular use of OST, peer pressure, easy access and availability of drugs, and want of enjoyment during events.

Although a few respondents reported to sometimes taking other drugs, a larger proportion felt and understood the benefits of OST. Some of the benefits expressed by the respondents were health benefits, such as they feeling energetic, reduced sweating and body chills, improved sleeping patterns, improved financial conditions, reduced craving for drugs, reduced withdrawal symptoms, improved eating habits, and willingness to quit drugs.

Although the benefits of OST are evident, yet there are challenges that were experienced by the respondents. These were the distance and high transportation costs to the OST centres on a daily basis, health issues when during initial process of OST, and stigma and discrimination on a regular basis. They also felt that they were becoming dependent on the OST and without it; they would not be able to function.

In terms of service uptake, the main services that the respondents were aware of and accessed were counselling, HIV testing, medical check-ups and acquiring condoms.

CONCLUSIONS

The study has brought out pertinent data that could be used to understand the drug use patterns in the state. This understanding can help in formulating policies and programmes to enhance the support for drug users. Although the respondents have experienced the benefits of OST as an approach to wean away drug users from drugs, yet there is almost one fourth (26%) of OST clients who are simultaneously ingesting other drugs. As OST clients are experiencing withdrawal symptoms, it is essential to check the proper dosing of OST for the clients. Besides the physical factors that influence the clients to also take other drugs, there are social factors that act as facilitators for clients to take them along with OST. It is important to also note the age of initiation of drugs is very low (15-17 years). Besides peer pressure, the easy access to drugs is another reason for youth to experiment and get addicted to them.

RECOMMENDATIONS

There is a need to prevent school children from initiating drugs. Parents need to be aware of the early danger signs of drug use and curtailing the easy availability and access of drugs should be a priority. This could be done by networking with stakeholders such as existing community groups who have been working on this issue. The distance between clients and OST centres need to be reduced by expanding to suburbs or block headquarters depending on case load. To tackle this issue, take home dosage to appropriate clients could be encouraged. Expanding the role of peer educators where they can assist in providing OST medicine to the OST clients during their community visits would improve uptake of OST.

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Psycho-social Correlation to OST Dropouts in Mizoram

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INTRODUCTION

It has been estimated that there are 177,000 Injecting Drug Users (IDUs) in India (Sarkar et al., 1993), with majority of the high number of IDUs hailing from the states such as Manipur, Nagaland, Punjab, Mizoram and Delhi as of 2014. Some states have much higher HIV rates among IDUs; for e.g. HIV prevalence among IDUs is 21% in Punjab, 18% in Delhi and around 12% in Manipur and Mizoram. HIV prevalence among IDUs in Manipur and Mizoram were slightly higher than the national average of 9.9% (NACO, 2015). Opioid Substitution Therapy (OST) was integrated as part of the harm reduction service component in NACP III and has been continuing ever since. Buprenorphine is the drug for the OST program in India; however, OST with methadone syrup has also been introduced for the first time in 2015 from the current NACP IV.

Despite the increasing number OST Centres as well as that of registered clients who access services provided by these centres, the regularity of the clients taking OST tend to decline and many registered client's dropout of the program. There can be many factors that may lead to this. As has been previously mentioned, OST being an integral part of harm reduction, it is imperative that the IDUs make use of the program so that their lives may be prolonged and their quality of life may be improved. The present study aims to explore the dropout rate of OST clients in Mizoram as well as study the different factors that could contribute to the existing problem and thereby contribute in taking necessary steps to tackle the problem with the outcome of the study.

OBJECTIVES

To explore the dropout rate of OST clients in Mizoram.

To evaluate various contributing factors related to the existing issue.

METHODS

The total sample comprised of 2 groups (90 OST clients + 99 OST dropouts) of registered clients from 4 (four) OST dispensing sites in Mizoram during a 3-month period. The participants were between the age group of 18 - 49. Majority of the participants completed high school (87%), while remaining 13% did not finish high school. Just over 51% of the participants are unemployed, while the rest (49%) are currently employed. Most of them (56%) come from nuclear families, 44% are from joint families. Majority (61%) are unmarried, 25% are married, 13% are divorced and 1% widowed. 35% belong to lower socio-economic status and 65% belong to higher socio-economic status.

Participants were screened and selected using purposive sampling. For OST dropout, the inclusion criteria were registered clients who had dropped out for a period of at least 1 month and were at least 18 years of age. For OST clients, the inclusion criteria were registered clients who remained in treatment for a period of at least 1 month and were at least 18 years of age. Registered clients who had severe comorbid psychiatric disorders were excluded. The two groups were closely aligned in terms of their demographic characteristics. The study employed two round of focussed group discussions to address the objectives put forth for the study.

After obtaining informed consent from the participants, they were administered the socio-demographic Performa and psychological tools, namely - Attitudes using the Buprenorphine Scale (ATB; Schwartz et al., 2008), Perceived Stress Scale - 10 (PSS-10; Cohen, Kamarch, & Mermelstein, 1983) and Patient Health Questionnaire – 4 (PHQ-4; Kroenke, Spitzer, Williams, & Löwe, 2009).

Data was analysed using the statistical program IBM SPSS Statistics 23. Descriptive and inferential statistics were used to meet the objectives of the study.

FINDINGS

OST dropout rate at four (4) OST centres that were examined was 19.22% during a period of 8 months. Results revealed OST clients have a better attitude towards buprenorphine compared to OST dropouts. Results indicated that OST dropouts perceive more stress, and have higher levels of anxiety and depression in their lives compared to OST clients. Among OST clients, positive attitude towards buprenorphine is associated with lower anxiety and/or depression.

In terms of the socio-demographic indicators used for the study, it was found that the highest percentage of both OST clients and OST dropouts are between the ages of 26 – 33. In terms of educational background, for a majority of both OST clients (44.4%) and OST dropouts (37.4%) have a higher-secondary level of. In terms of occupation, more than half for both OST clients (50%) and OST dropouts (53.5 %) were unemployed. Majority of both OST clients (58.9%) and OST dropouts (62.6%) were unmarried. Majority of both OST clients (58.9%) and OST dropouts (70.7%) were above the national poverty line.

Regarding their drug use history, among OST clients, age of first initiation was highest among 15-19-year olds (48%), while for OST dropouts it was among 10-14-year olds (42%). Tobacco/cigarettes were their gateway to substance use (65% for OST clients and 67% for OST dropouts). Substances currently used by OST clients were tobacco/cigarettes (62 %), and alcohol (28 %), while 21% still reported using heroin. Among OST dropouts, substances currently used were heroin (62 %), tobacco/cigarettes (44%) and alcohol (31%). Majority of OST clients (50%) had sought psychiatric treatment and considered the treatment to be the most helpful (32%). Among the OST dropouts, majority have sought treatment in rehabilitation centres (54%) and considered such treatment to be the most helpful (30%).

In terms of reasons for starting OST, majority of OST clients (41%) started the treatment in abstaining from heroin and going through the process of detoxification (32%) while majority of the OST dropouts started the treatment for detoxification (57.6%) and harm reduction (30.3%).

Majority of OST dropouts (64.6%) have retained OST to reduce heroin cravings while OST clients continue OST to improve their physical fitness, even for a short while (43 %) and reduce heroin cravings (37%).

For OST dropouts, peer pressure (14.1%) was considered as an important reason for dropping out of the treatment. Other factors include abusing other drugs while on treatment (13.1%), heroin cravings not subsiding while on OST (11.1%), commuting daily to the OST centres (9.1%) and fear of dependency on OST (5.1%).

CONCLUSIONS

Results indicated more positive attitude towards buprenorphine. Similar findings have also been found by other studies (e.g., Shah et al., 2013; Garg, R. et al., 2018; Egan et al., 2011; Sohler et al., 2013). The present study also found lower perceived stress, anxiety and depression among OST clients compared to OST dropouts. Psychiatric comorbidity has been found to be associated with early dropout (Favrat, B. et al., 2002; Lieb, M. et al., 2010). Positive attitude towards buprenorphine was associated with lower anxiety and depression among OST clients. Results have also indicated that the younger the age of initiation of drug use, the more difficult it is to retain them in the OST program. Even while on treatment, majority of the OST clients were using other substances. Psychiatric treatment was not considered as helpful for many of the OST Dropouts (14%) while religious therapy was considered helpful (28%). Support from family and friends strongly influenced both retention and dropping out of the treatment.

RECOMMENDATIONS

Proper awareness on the importance and effectiveness of OST needs to be channelized among the drug users as well among the relatives of the clients. The psycho-physiological effects of drugs and OST needs to be addressed. Life skills such as decision-making skills, problem solving skills and critical thinking among others needs to be incorporated in addressing issues on drugs. Further research is suggested in gaining more exhaustive insight into issues related to drugs and treatment procedures.

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Prevalence of HIV Infection and Associated Factors among Injecting Drug Users (IDU) of 18 to 25 Years Age Group of Tripura: A Mixed Method Study

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INTRODUCTION

Injecting drug use is a global public health issue. It is estimated that around 15 million people worldwide inject drugs, of which around 17% have Human Immunodeficiency Virus (HIV) infection.[1] In India, the prevalence of HIV among injecting drug users (IDUs) at the national level is 9.9%.[2] The IDUs are more vulnerable to HIV infection because of their high risk behavior such as, sharing of contaminated injecting equipment, having unprotected sex and multiple sexual partners.[3] IDUs practice unsafe behavior either due to lack of knowledge regarding the risk for HIV infection or due to peer norm, where it is considered as normal activity by their peer groups. Apart from HIV infection, reusing an un-sterile needle by IDUs can lead to various other complications such as, skin and soft tissue infections (SSTI), abscess formation and visible scarring.[4]

National AIDS Control Organization (NACO) has endorsed the harm-reduction strategy, where IDUs are provided with needles/syringes to reduce the chance of sharing. Apart from this, IDUs are counselled to switch over from injecting to medically supervised orally prescribed medicine. Studies conducted worldwide and in India have shown that high-risk behaviours such as sharing needles, re-using needles after cleaning, and unsafe sexual practices are common among IDUs.[5-8] Studies done in different parts of India had shown the association of lower literacy, higher urbanization and socio-economic development with higher HIV prevalence. Similarly, other studies have also showed low levels of HIV awareness and condom use in India.[9] Studying the behavior of IDUs is vital as it provides information about the possible risk of spread of infection from them to the general population. Therefore, this study aims to explore the extent of the HIV burden and the behavioural risk factors among young adults who are IDUs in Tripura.

METHODS

The study was conducted between the months of April-June 2022. Out of the total eight districts of Tripura, two districts (Dalai and West district) with higher prevalence of IDUs were selected. Within each district, hotspots were identified with the help of Targeted Intervention Non-Government Organizations (TI-NGOs) and index case(s) (first respondent) were contacted. Following this, a respondent driven sampling method was used to find out the next study participant and so on to reach the desired sample size of 40 in each district. In case of any non-responder, the next person identified from the same or nearby hotspot area by respondent driven approach was contacted. Self-reported (verbal and/or record based) sero-status based on their previous HIV-testing was recorded to estimate the prevalence of HIV among IDUs. Those found not tested for HIV infection in the past were counselled for testing by the study investigator and if the respondent was willing, s/he was referred for HIV testing as per NACO guidelines.

Quantitative data was collected from study participants after written informed consent in their preferred language, by trained field investigators, using a pre-tested study tool, by personal interview method, keeping in mind the privacy of study the participants. Data was analysed using IBM SPSS version 16.0. Qualitative data was collected by two Focused Group Discussions (FGDs) and two In-depth Interviews (IDIs). These semi-structured FGDs were conducted with 8-10 purposively selected candidates who were from 1 of the each selected district and provided their written consent along with agreement to devote time for the qualitative data collection.

IDUs, who were seriously ill, mentally unstable or not in a condition to be interviewed during the visit were excluded from the study. Study participants willing to withdraw himself/herself during the ongoing interview/discussion (in case of FGD) were also excluded from the study. Ethical clearance for the study was obtained from Institutional Ethics Committee of Tripura Medical College & Dr. BRAM Teaching Hospital before commencing the study.

FINDINGS

During FGDs, Participants disclosed that the transition to injecting drug use was a gradual process, typically starting from non-injecting drug use. They often initiated this transition with the influence of friends and companions who were already IDUs. It was also revealed though IDIs with female IDUs that in most cases they were forced to engage in the practice by their partners and/or companions. During FGDs, IDUs also revealed that there are communities where as much as three-fourth of young males were taking drugs. Majority of them were aware about the risk of HIV infection with injecting drug use and sharing of needles but when suffering (withdrawal symptom) starts, they can be relieved only by injecting drugs. In their opinion, OST gradually becomes ineffective and those who are on OST, were simultaneously injecting other drugs. Issues of long-distance travel in obtaining OST sometimes made clients miss their work creating further issues in adherence. In times of shortage of money, IDUs would even steal items to get money for injections. They admitted that they were oftentimes shunned by society. A female IDU also revealed about contemplating suicide due to discrimination. However, they mentioned that they were met with a positive attitude by health care workers at the OST centers.

The study shows, majority (90% of West district and 97.5% in Dhalai) belonged to rural areas with mean age of 22.73 years and 22.45 years from the West and Dhalai districts respectively. Most of the respondents were males (92.5% and 85% respectively), had up to secondary education (50% and 52.5% respectively) and were mainly students at present in west district (55%) or unemployed (27.5%) in Dhalai district. They mainly belonged to Upper middle socio-economic class (57.5% and 65% respectively) and were unmarried (82.5% and 65% respectively in West and Dhalai districts).

Mean age of initiation for injecting drugs was 18.85 (± 2.466) years in West and 17.98 (±1.790) years in Dhalai district. Majority admitted to have taken injectable drugs in the past week as of conducting the survey (80% in west and 60% in Dhalai district) and mostly would inject drugs daily or intermittently throughout the week. The IDUs would usually inject drugs in the presence of a peer group. As of completion of the survey, they indicated using only sterile syringes, with rates of 77.5% in the West district and 95% in the Dhalai district. However, a lower percentage of IDUs in the Dhalai district (55%) acknowledged ever being on Opioid Substitution Therapy (OST), in contrast to 80% in the West district.

Among the IDUs who reported to have had sexual intercourse after starting to inject drugs, majority (60%) in West district and 15.15% in Dhalai district, reported to have had sex with multiple partners in past month as of completion of the survey. Approximately 17% and 15% of IDUs in West and Dhalai districts, respectively, had paid sex in the month preceding the survey. Practice of condom use during sexual intercourse was observed to be 2.86% and 45.46% among IDUs from West and Dhalai districts. While, the proportion of IDUs from West and Dhalai districts who always used condom was 65.71% and 21.21%, respectively.

Most of the IDUs (97.5% and 95% in West and Dhalai districts respectively) were previously tested for HIV and majority within the past three months (66.67% and 52.63% in West and Dhalai district) before the initiation of the survey. All the tested individuals were aware of their HIV sero-status. The self-reported HIV seroprevalence among IDUs was 53.85% in the West district, compared to 38% in the seroprevalence recorded by the Tripura State AIDS Control Society (TSACS) over the past four years, spanning from 2018-2019 (pre-COVID period) to 2020-2021 (COVID period). In the Dhalai district, the self-reported HIV seroprevalence among IDUs was 57.89%, in contrast to the recorded 50.6%. Almost all HIV positive IDUs (81% and 91% approximately in West and Dhalai districts respectively) were on Anti-Retroviral Therapy (ART). Only socio-economic status of IDUs of Dhalai district was found to be a statistically significant ($p = 0.003$) risk factor in this study.

CONCLUSIONS

Males between 22 to 23 years of age, either students or unemployed and up to secondary education, mainly represented the study population of IDUs. Unsterile needle/syringe sharing within peer groups, having multiple sexual partners and not using condoms regularly during sexual intercourse, were important study findings. HIV infection among IDUs was significantly more common among upper middle socio-economic class in Dhalai District. Also, self-reported prevalence of HIV among IDUs in both the study districts was higher than TSACS reported HIV prevalence among IDUs in the same districts. Around 15-17% of the respondents had paid sex and 21% had never used condoms.

RECOMMENDATIONS

HIV positivity is higher than the previous years and majority of the respondents are HIV positive. Prevention activities including positive prevention is very important and need to be focused. Around 19% of positive clients are not on ART in West district and therefore retention on ART is also one of the activities that needs to be emphasised in the region. Condom use is poor among the participants and further IEC activities and condom use promotion may be suggested. Further research study may be planned, including all districts of the state to find out the actual prevalence and factors associated with such high prevalence of HIV infection among IDUs of Tripura.

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Substance Abuse among Transgenders in Tamil Nadu: A Multi-centric Study

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INTRODUCTION

The term "Transgender" denotes those people whose gender identity, expression, or behaviour is typically different from those associated with their assigned sex at birth. They are the ones who exhibit gender variant behaviour and roles in society. It is estimated that 4.88 million of the adult population in India identify as transgender. Being a vulnerable group, they oftentimes experience stigma, social exclusion, and marginalisation right from birth. Due to their gender dysphoria, they are rejected by their families and society. They are then led to risky sexual behaviour or substance abuse which tends to become chronic in presence of the already present psychological discomfort they go through, when left unattended.

Substance abuse is variedly prevalent in all age groups and genders. A Nationwide Survey conducted in India revealed (Pal, Srivastava, Dwivedi, Pandey, & Nath, 2015) that national illicit drug use was approximately 3%, with cannabis being the most used substance. The World Health Organization (2014) estimated alcohol use disorders in India at 2.6%, among men 4.5% and among women 0.6%. However, the prevalence of alcohol use and misuse likely varies by region and subpopulations. Although some studies consider the risk of substance abuse within the LGBTQIA+ community to be similar to that of cisgendered people, others conclude that the risk is even greater for transgender individuals, in particular highlighting alcohol consumption among this population. Few studies around the world that focussed on substance abuse in transgender populations, did not provide evidence about the burden of substance abuse and its associated factors in an Indian setting. India-centric studies on this topic are needed to have an improved understanding of the substance abuse patterns of this community which will help in devising plans and services to combat the problem.

OBJECTIVES

To estimate the prevalence of substance use disorders and factors associated with substance usage among Transgenders.

METHODS

A cross sectional study conducted among transgenders enrolled in Targeted Intervention (TI) projects across the state. Data was collected by interview method by 3 trained health care providers using a structured interview schedule. Assuming 50% prevalence with an absolute precision of 7.5% was selected and using a design effect of 1.5 for cluster sampling, the final sample size was calculated to be 260. This was determined using the formula 4pq/d^2. Therefore, a total of 264 participants were recruited for the study based on the estimated sample size and taking in account the refusal rate.

Sampling was done by performing cluster sampling method, where each TI site was considered as a cluster. Hence, six TI sites were selected at random and within each site TG candidates were selected randomly from the line list by using simple random sampling. The number of TG individuals selected within each TI site is proportionate to the size of the cluster.

Ethical approval was obtained from the Institutional Ethics Committee. Informed consent was obtained from the participants. Privacy was ensured while interviewing. Anonymity and confidentiality of the data collected was maintained throughout the study.

Data collected was checked for consistency and completeness. Data was entered and analysed using IBM SPSS version 16. Descriptive statistics like percentages and means were used. Analysis was done using chi-square test and binary logistic regression.

Chi square was used to find any association between the qualitative variables, and logistic regression was performed to determine the kind of association that existed between these variables. Multivariate analysis was done using multiple logistic regression to check for the type of association between the variables. P value of less than 0.05 was considered as statistically significant.

The research was conducted with TG individuals who were enrolled in TI projects in Chennai, Kanchipuram, Villupuram, Nagai and Madurai, with study population sorted from highest to lowest. The studied individuals were selected randomly without bias.

FINDINGS

Majority of the respondents belonged to 21 - 40 years of age and majority were transsexuals over transgenders. Nearly two-thirds of respondents had undergone medical intervention to alter their gender identity.

Education is a very important tool and a fundamental human right. Nearly 97.3 % of the respondents could read and write in at least one language. The study showed that 96.2% respondents were attached with a Jamath which is an Islamic council, enabling them a sense of protection and unity. The study reveals that 64% of the TGs earn between Rs 5,000 and Rs 10,000.

From the study group of 264 participants, only 6 participants indulged in smoking which contributed to only 2.3% of the group. Only 0.8% of the population smoked daily and 1.1% of the population smoked monthly. Only 0.4% of the respondents smoked weekly.

Table 1: Distribution of participants based on smoking habit and Ganja use (N = 264)

Variables		Frequency
Smoking	No	258 (97.7)
	Yes	6 (2.3)
Easy access to cigarettes	Available	2 (0.8)
	Easily available	5 (1.9)
	Not available	257 (97.3)
Frequency of smoking	Daily	2 (0.8)
	Monthly	3 (1.1)
	Does not smoke	258 (97.7)
	Weekly	1 (0.4)
Age at which smoking was initiated.	13	1 (0.4)
	18	1 (0.4)
	19	1 (0.4)
	22	1 (0.4)
	24	1 (0.4)
	28	1 (0.4)
	Never smoked	258 (97.7)

Variables		Frequency
Availability of Ganja	Information not available	222 (84.1)
	No	42 (16.9)
frequency of Ganja use	Information not available	232 (87.9)
	No	32 (12.1)
First use of ganga	Information not available	233 (88.3)
	No	31 (11.7)
Using with friends during gatherings yes/no	Information not available	156 (59.1)
	No	108 (40.9)
Frequency of use	Information not available	233 (88.3)
	No	31 (11.7)
Other substance	Cool lip	31 (11.8)
	Hance	11 (4.2)
	Hance/ cool lip	1 (0.4)
	Manichand	2 (0.8)
	No	220 (82.9)

81.8% of the group have consumed alcohol. 40.9% of the population consumed alcohol 1-5 days per month. 25% of the population consumed alcohol 6-10 days per month i.e., one in four respondents consumed alcohol for one-third of a month. 4.5% of the population consumed alcohol 11-15 days per month i.e., they consumed alcohol once in every two days. 3% of the population consumed alcohol 16-20 days per month. 8.3 % of the respondents consumed alcohol 21-30 days a month or daily. In the assessed month of the study, roughly 50% of the study group had consumed alcohol 1-5 days, 14% consumed 6-10 days, 4.2 % consumed 11-15 days, and 8.3 % consumed between 20-30 days.

Ease of retrieving alcohol was calculated at 29.9%, difficulty in retrieval for 0.8% and moderate ease in retrieving alcohol was recorded for 51.9% of the study group. 46.2% of the study group consumed hot alcoholic beverages while 28% consume cold alcoholic beverages, while 8% of the study group consumed both.

Table 2: Distribution of participants based on Alcohol use (N = 264)

Variables		Frequency
Current consumption of alcohol	No	48 (18.2)
	Yes	216 (81.8)
Frequency of consuming alcohol in a month	1-5 days/month	108 (40.9)
	6-10 days/month	66 (25)
	11 - 15 days/month	12 (4.5)
	16 - 20 days/month	8 (3)
	21 - 30 days/month	22 (8.3)
Frequency of consuming alcohol during the study period (one month)	1-5 days/month	137 (51.9)
	6-10 days/month	37 (14)
	11 - 15 days/month	11 (4.2)
	16 - 20 days/month	7 (2.7)
	21 - 30 days/month	22 (8.3)
Occasion	Daily	27 (10.2)
	No	220 (82.9)
	Weekly 2 times	7 (2.3)
	Weekly 3 times	5 (2)

Variables		Frequency
Ease of retrieving alcohol	Moderate	137 (51.9)
	Difficult	2 (0.8)
	Easy	79 (29.9)
	No	46 (17.4)
Alcohol type coded	Hot	122 (46.2)
	Cold	74 (28)
	Both	21 (8)
Under the influence of alcohol in last 12 months faced any sexual abuse	No	242 (91.6)
	Yes	22 (8.3)
Faced any sexual violence by others who are under the influence	No	215 (81.5)
	Yes	49 (18.6)

It was seen that substance abuse was significantly higher in the age group of 21-40 years (OR=3.868, 95%CI=1.387-10.786), but after adjusting for other variables, it was not found to be significant. Those participants enrolled in TI sites of THAA Chennai and TRA Chennai were found to be significant even after adjusting for other variables. (OR for THAA Chennai = 0.148, 95% CI = 0.026-0.842, a OR for TRA Chennai = 0.134, 95% CI = 0.020-0.885) Those who were found to have post-graduate level of education were found to be having significantly lower rates of substance abuse (OR=0.255, 95%CI = 0.069-0.936) but after adjusting for other variables, it was not found to be significant.

Table 3: Factors associated with substance use

Variables		Substance use n=264		Chi square p value	Odds ratio	Odds ratio p value	95.0% CI for exp(b)	
		Yes	No				Lower	Upper
Age in years	0 - 20	7 (2.6)	14 (5.3)	0	-	-	-	-
	21 - 40	19 (7.2)	147 (55.7)		3.868	0.01	1.387	10.786
	41 - 60	12 (4.5)	42 (15.9)		1.75	0.324	0.576	5.316
	>60	10 (3.8)	13 (5)		0.65	0.491	0.191	2.215
TG or TS	TG	17 (6.4)	81 (30.7)	0.462	-			
	TS	31 (11.7)	135 (51.1)		0.914	0.787	0.476	1.755
Place	Kanchipuram	2 (0.8)	48 (18.2)	0	-	-	-	-
	Madurai	5 (1.9)	19 (7.2)		0.158	0.036	0.028	0.888
	Nagai	4 (1.5)	36 (13.6)		0.375	0.272	0.065	2.161
	Thaa Chennai	17 (6.4)	33 (12.5)		0.081	0.001	0.018	0.374
	Tra Chennai	16 (6.1)	34 (12.9)		0.089	0.002	0.019	0.411
	Villupuram	4 (1.5)	46 (17.4)		0.479	0.409	0.084	2.743
Education	Illiterate and below primary	0 (0)	7 (2.7)		-	-	-	-
	Primary	12 (4.5)	59 (22.3)	0.066	-	-	-	-
	Secondary	11 (4.2)	72 (27.3)		1.19	0.7	0.492	2.88
	Higher secondary	11 (4.2)	38 (14.4)		0.628	0.317	0.253	1.561
	Graduate	9 (3.4)	21 (8)		0.424	0.091	0.157	1.146

CONCLUSIONS

The prevalence of substance abuse was 81.8% among the TG respondents of the study. Alcohol consumption was recorded in all of the respondents who had substance abuse issues. Among transgender women, binge drinking was significantly higher in those who used amphetamines, had depressive symptoms, dropped out of school because of their gender identity, or had experienced verbal abuse. In addition to structural discrimination, part of the transgender group is also regularly exposed to situations of social exclusion, marginalisation, and sex work in which drug use (mainly tobacco use) is very frequent. The factor most strongly associated with abuse, especially in the case of prescription opioids and tranquilisers, was the age at which the first medication had been prescribed. The study discovered that substance abuse was significantly higher in young transgenders and within Chennai. On multivariate analysis, significant abuse was present only in Chennai.

Several hypotheses have been proposed about the reasons for this relationship between substance use and identifying as transgender. One of the most accepted of these is the minority stress theory which considers that the stigma, prejudice, discrimination, and harassment these individuals regularly receive from society could favour the emergence of depression, anxiety, or suicidal ideation, given that the prevalence of these disorders is higher in this group compared to their cisgender peers. Thus, the use of substances would arise as a response to this discomfort and as a product of both internal factors (self-stigma, expectations of rejection, and non-conformity with self-image) and external factors (interpersonal and structural discrimination).

RECOMMENDATIONS

To address the potential challenges faced by transgender individuals dealing with dual disorders, several key recommendations can be made. First and foremost, there is a critical need for focused research to understand the relationship between psychiatric comorbidities and substance abuse in this population. Secondly, it is essential to develop tailored intervention programs that account for the unique intersection of gender identity, mental health, and substance abuse issues. Additionally, enhancing coordination between substance abuse and mental health care systems is vital, achieved through cross-training, improved communication, and clear referral pathways. Healthcare providers should also receive training in culturally competent care to create inclusive and respectful environments. Finally, raising awareness about the challenges faced by transgender individuals and advocating for policies that promote equal access to care while reducing stigma are essential components of a comprehensive approach to addressing these issues.

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Cascade of HIV Diagnosis, Care and Treatment among Transgenders of Kakinada District: A Gap Analysis

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INTRODUCTION

Transgendered individuals (TGs) are one of the established high-risk groups for HIV/AIDS[1]. Many interventions have been initiated by the National AIDS Control Programme (NACP), which are targeted at prevention and treatment of HIV among such high-risk groups[2].

Andhra Pradesh has an estimated 394,077 People Living with HIV (PLHIV), the second largest population in India. It has the highest estimated annual AIDS related deaths (9186 deaths), in India as per the India HIV estimates of 2021 published by the National AIDS Control Organization (NACO) [3]. Andhra Pradesh is also one of the high "adult-HIV prevalence" states in India with a prevalence rate of 0.37% among antenatal mothers and 4.61% among transgenders[4,5]. The erstwhile East Godavari district had the highest prevalence of PLHIV in Andhra Pradesh in 2019.[6]

The TG population have faced the brunt of inequity in receiving healthcare[8]. As such, the need for Community based interventions has been identified[7].Special initiatives such as 'One-stop centres' for the transgender community have been launched in the state since 2020 at a tertiary level, and under the Voluntary Health Services – Centers for Disease Control and Prevention, (VHS-CDC) Project Aspire[8,9].

Several NGOs also partner with the government in providing care to the TG population. However, there is limited information on the prevalence of HIV among this at-risk vulnerable population, exacerbated by barriers in receiving HIV prevention and treatment services. Rationale of the present study was to identify gaps in HIV/AIDS care continuum amongst TG individuals to improve their HIV-related health outcomes.

OBJECTIVES

To identify the proportion of TG individuals in each step of care continuum cascade- diagnosis, treatment initiation, retention of care, viral load suppression among the TGs registered at ARTCs

To explore the challenges in recognising cases and in care retention among transgenders

METHODS

A mixed method study was conducted in the new district of Kakinada, reorganized from the erstwhile East Godavari district. Mixed method study enabled better understating of the research question. [10]

The quantitative component consisted of a cross-sectional study of all the TG individuals registered with the district through Non-Government Organizations (NGOs). Data on the number of subjects who underwent screening, those who were tested positive, those who were on Anti-Retroviral Therapy (ART) and those who had suppressed viral count was gathered from the records using a pre-designed case record form.

For the qualitative component of the study, hotspots were identified in the Kakinada district by consulting the local District AIDS Prevention and Control Unit (DAPCU), and the district ARTC at the Government General Hospital, Kakinada. As TG individuals are a hard-to-reach population, non-probability sampling through snowball method was employed. Inclusion criteria were aged 18 and older, identifying themselves as transgendered, and currently seeking any form of healthcare service directly or through an NGO

In-depth interviews with trans identified individuals and with health care providers were conducted, for understanding the facilitating and inhibiting factors in seeking HIV care prevention and treatment services. Interviews were conducted by five trained research investigators using an interview guide. Assistance was provided by five investigators who made notes and recorded the audio. Short notes were taken down during the interviews, and the transcription of the interviews in English and the local language was carried out on the same day by the recorders. A total of 30 interviews were conducted with prior decision despite data saturation.

FINDINGS

Quantitative Analysis

The data was collected from various ART centers like Tuni ARTC and GGH Kakinada, which was then triangulated with the data from NGOs namely CHANGES, BREAD, WISE and SASS. The total tally of TG individuals in the district was 521 after removing duplicate data. Among those identified, 502 (96%) were screened for HIV.

A total 98 PLHIV TGs were registered for ART (85 from ARTC, GGH & 13 from ARTC, Tuni). Among them, 92 (93%) were initiated on treatment. The reason for non-initiation was because some of the data of registered TG individuals was from before 2017, during a period where the policy for initiation of treatment was based on CD4 count. Also, many refused treatment.

Total TGLHIV who were currently retained on ART was 61 (66% of all the TGs who were initiated on ART at the two ARTCs). The viral load testing was done only among 48 (52.7% of the 92 TGLHIV initiated on ART) and viral suppression was found to be achieved in 37 (40.2%) of them. The reasons for lack of retention are LFU (lost to follow up), transfer out, and deaths. The reasons for no universal testing for viral load suppression are the gap in supply management system and poor patient compliance.

Qualitative Analysis

The Facilitating factors associated with HIV prevention and continuum of care among the TGs were awareness about HIV, role of NGOs, support from peers, availability of services, access to Govt. facilities, and private practitioners.

Role of NGOs

“Yes, they look after us very well. We go to their office, we will be having meetings and then they educate us regarding HIV. If we have any health issues they help us in seeking treatment”, (a young TG)

Inhibiting factors included the negative attitude of NGOs, ignorance about HIV, stigma and discrimination at the facility, unsupportive medical staff, long wait times, medication side effects, irregular treatment, inconvenient timings of Govt. Health facilities, and high treatment cost at private practitioners. Perceived needs were the requirement of separate health facilities, better social support and employment opportunities.

“A young boy at the hospital talked improperly to my friend and she cried a lot that day” (P,23-year-old)

“It will be more beneficial for us if the government allots a separate clinic or dispensary for us”

Perceptions of health care providers revealed that challenges in case retention included frequent migration of TGs, fs, non-conducive timings, poor compliance and, non-availability of prescriptions

“Patients come to us after going to private doctors.... don't bring their prescriptions... We don't know what medicines were given” (MO, ARTC)

Staff concerns included heavy workload, poor job security, and the contractual nature of jobs.

CONCLUSIONS

The study revealed that there are gaps in linking TGLHIV to sustained quality care and treatment. The NGOs are providing good support to the community in providing preventive services though health education and regular screening. Issues surrounding general apprehension in medicine intake due to fear of unforeseen side effects, hesitancy of being stigmatized when accessing health facilities, unaligned timings that lead to missed outs/lost to follow up/opted out cases, and the overall deficiency in the supply chain management system are some of the reasons for inadequate HIV care continuum for TG individuals.

RECOMMENDATIONS

The study findings indicate the need for strengthening the TGHIV care continuum. The fear of side effects needs to be addressed to improve treatment adherence. Strengthening the linkages with NGOs and private practitioners and involving peers from the community in creating health awareness, community-based ART dispensing, improved supply chain management, and better human resource management with incentivization, will enable successful navigation of the continuum of care.

ACKNOWLEDGEMENTS

The authors are thankful to officials from NACO, APSACS, DAPCU East Godavari, Staff of ART Centre, the NGOs, postgraduates of Department of Community medicine for their support and all the study participants for their valuable inputs.

OPERATIONAL DEFINITIONS

Tested Those Transgenders who are screened for HIV and have undergone a confirmatory test for HIV in the last six months as of initiation of the study.

Initiated on treatment Those transgenders who tested positive for HIV and have been initiated on treatment after the Pre ART CD4 count was done.

Retained in care Those transgenders who continued to be on ART at the time of data collection.

Viral load Suppression Those Transgenders who were on ART and had a viral load of <1000 copies/ml after 6months to one year of treatment.

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Factors Influencing Access of HIV Services among Trans-women in Delhi

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INTRODUCTION

Despite the availability of preventive and therapeutic services for HIV infection for many years, HIV continues to be a significant public health concern [1]. Notably, transgender women face a higher risk of contracting HIV compared to cisgender adults. In Delhi, the HIV positivity rate among transgender individuals is 8.82%, as reported by HIV sentinel sero-surveillance [2]. Transgender individuals often encounter societal stigma, violence, discrimination, and marginalisation. This social exclusion frequently leads to adverse outcomes such as dropping out of school, discontinuing education, separation from family and friends, and experiencing discrimination from society [3,4]. Accessing HIV care can be challenging for transgender individuals, resulting in poor health outcomes and an elevated risk of HIV transmission. Insufficient data exist to understand the factors that either facilitate or hinder transgender individuals' utilisation of available healthcare services related to HIV [5]. This study aims to identify the factors that enable and inhibit transgender women accessing HIV related services in Delhi.

METHODS

This mixed-method research was carried out with transwomen registered with targeted intervention (TI) non-governmental organisations (NGOs) in the North-East, East, and Shahdara districts of Delhi. The quantitative aspect of the study was carried out with 170 transwomen aged 18 years or older aimed to provide a comprehensive overview of their socio-demographic characteristics using a pre-tested, semi-structured, interviewer-administered questionnaire. The collected data were stored and analysed using Microsoft Excel and SPSS software. Normally distributed continuous variables were presented as mean (standard deviation), while non-normally distributed variables were presented as median (interquartile range).

Qualitative data, on the other hand, was gathered through purposive sampling techniques. This involved conducting two focused group discussions (FGD) with transgender women, and two FGDs with family members (referred to as "gurus") of transwomen. Additionally, five in-depth interviews were conducted, including two with people living with HIV/AIDS (PLHIV) who were transgender, and three with healthcare providers (a medical officer, a counsellor, and a lab technician).

FINDINGS

Findings from quantitative component of the study

Socio-Demographic profile

The mean (SD) age of the participants was 29.2 (SD-9.93) years. Majority (69%) of transwomen were single, about one-fourth were in a relationship (24%) and few (6%) were married. The median (IQR) monthly income was Rs. 15,000 (IQR-11,000. -20,000). Most of the transwomen were residing within transgender community (44%). The remaining participants were residing alone (29%), with birth family (18%) or with a partner (7.0%).

Morbidity profile and addiction history

Substance abuse was present in over half (52%) of the participants. Thirty-three (17%) of the transgender individuals reported suffering from some health problems such as hypertension, diabetes mellitus, dermatological conditions, musculoskeletal disorders, dyspepsia, psychiatric illnesses, hypothyroidism and other conditions. The population of People Living with HIV AIDS (PLHA) among the transgender individuals in the study was 13% (n=22).

Service Utilisation

The average number of visits to the TI-NGOs by the transgender women was 2.8 (SD, 3.20) times per month. Few (2%) transgender women had not undergone HIV testing. The median (IQR) duration of testing for HIV from the occurrence of the symptoms was 19.0 (3.00-47.50) weeks. The mean (SD) distance of the ART centre where treatment was being availed was 8.0 (6.33) kms. The mean (SD) duration since treatment was started was 9.7 (6.6) years. The PLHA transwomen visited the ART centre on average 4.0 times (median) per quarter.

Findings from qualitative component of the study

Barriers for service utilisation

Participants reported that they encountered challenges when attempting to access healthcare services in general. These issues encompassed the absence of specific queues for transgender individuals, instances of discrimination by medical professionals and staffs. TG individuals who are experiencing HIV symptoms encounter difficulties in getting tested if they are not affiliated with a registered TI site or NGO which is mostly prevalent among newly arrived transwomen in Delhi. Experiences of abandonment by their birth families, which frequently contributed to mental health issues, reliance on substances such as drugs and alcohol subsequently leads to engaging in high-risk behaviours like unprotected sexual activity. Trans women who are PLHA encounter significant societal (TG community) prejudice and bias, forcing them to conceal their HIV-positive status. Those who are taking antiretroviral therapy (ART) have reported keeping their medications hidden from their household members (Gurus and chelas) for fear of being thrown out of the shelter. Tracking and providing counselling to partners was identified as a significant obstacle, as they typically do not respond when the topic of an HIV test is raised.

Facilitators for service utilisation

Transgender women who lived with their birth families or employed in regular jobs in various organisations, despite experiencing discrimination, persisted in seeking healthcare services whenever necessary. The financial assistance scheme for PLHA was identified as a supportive element, as their HIV-positive status frequently resulted in losing employment. TI site provides the transgender community a common physical space for mutual support and the feeling of belonging to a larger community. The utilization of HIV-related services within the TI-NGO was enhanced by factors like access to medical services, health education, and consultations with healthcare professionals. Additionally, the presence of a supportive community, regular social gatherings, easy access to condoms and lubricants and assistance during interpersonal or social disputes were reported as additional factors that promoted engagement with these services.

CONCLUSIONS

Transgender individuals face difficulties accessing healthcare services, including discrimination by medical professionals. Those with HIV symptoms may struggle to get tested if not affiliated with a registered site. Abandonment by families often leads to mental health issues and high-risk behaviours. Transgender women with HIV/AIDS hide their status, even medication, due to societal bias. Partner tracking and counselling are challenging as partners often disappear when HIV testing is discussed. Acceptance by birth family and having a regular job helped the participants to access health services. TI - NGO sites provided community support. The uptake of HIV services benefited from medical care, health education, and feeling of social belonging.

RECOMMENDATIONS

Based on the study's findings, it is advisable to implement transgender-inclusive measures in healthcare facilities, such as staff sensitization. Society at-large should also need to be sensitised. Additionally, capacity building programs for peer educators, outreach workers, and workers in TI-NGOs are essential, as they serve as the crucial link between HIV-related services and transwomen.

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Trends of HIV/AIDS Infection among Prisoners in Central Jail, Silchar, Assam

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INTRODUCTION

Globally, the prevalence of Human Immunodeficiency Syndrome (HIV) and other infectious diseases is much higher among prisoners than in the general population.[3] The UNAIDS paper titled "On the Fast-Track to end the AIDS by 2030: Focus on location and population", states that the key populations are at an increased risk of acquiring HIV and are overrepresented in the prison population because of the sexual orientation of the inmates, their gender expression, occupation, or criminalization of behavior. It is thereby recommended that the prison population is introduced to the full array of services.[1] Prisoners live their life behind bars and this takes them away from their families, marriages, heterosexual contact, jobs, friends, communities, and religious activities, by putting them in an extremely restricted and unfavourable moral environment for years at a time.[2]

There is very limited data on the prevalence of drug use or HIV risk behavior among Indian prisoners. The available data highlights that prevalence of HIV, sexually transmitted infections, Hepatitis B and C, and Tuberculosis in prison populations is 2 to 10 times higher than the general population.[1,4] Imprisoned people are frequently re-incarcerated after release, cycling between prisons and the general community. As potential carriers of transmissible diseases, they pose risks to themselves, their immediate families, and the wider community, with detrimental effects on public health.[5,6]

Analysis of prison data (2015) indicates that across 1,401 prisons, there were 419,623 prison inmates, with 67.2% of the total being under trial. 8% of those under trial were below the age of 50 and would eventually return to the community outside the prison. There is a total of 31 jails in Assam, out of which 6 are central jails, 22 district jails, 2 sub jails and 1 other jail. The present study has been undertaken in the Silchar Central Jail with the following objectives:

OBJECTIVES

To understand the trends over time in HIV/AIDS among prisoners in Central Jails of Assam as per HIV Sentinel surveillance report 2019 and 2021

To study the knowledge, attitude and practices among the prisoners of the Central Jail, Silchar.

METHODS

The study was conducted at the Central Jail, Silchar after obtaining due permission from ASACS and respective jail authorities, and approval of the Institutional Ethical Committee. This study is a descriptive cross-sectional study in which 220 jail inmates were recruited using convenient sampling method.

A trained investigator collected data from jail inmates through interviews, by using a predesigned pretested structured questionnaire. The research team members supervised the data collection procedure thoroughly via on spot visits. The data was collected between Sept-Dec 2022, following which the data was analysed. Due care was taken to protect the confidentiality of inmates and any ethical issues were accounted for during the interviews, while dealing with female inmates.

Inclusion criteria

Jail inmates both undertrial and convicted, aged 18 and above.

Exclusion criteria

Uncooperative inmates and who did not give consent for the study

Statistical method was used

The study data was entered in an excel sheet and was further analysed by using SPSS statistical package version 22. The results were presented in tables, graphs and expressed by rates, proportion, mean. The test for significance was done by using Pearson's chi square test to show association between the factors.

Tools

Predesigned pretested structures questionnaire will be adopted from HSS Plus data form.

Secondary data collection from HSS Plus data 2021 and 2019 and jail hospital records.

FINDINGS

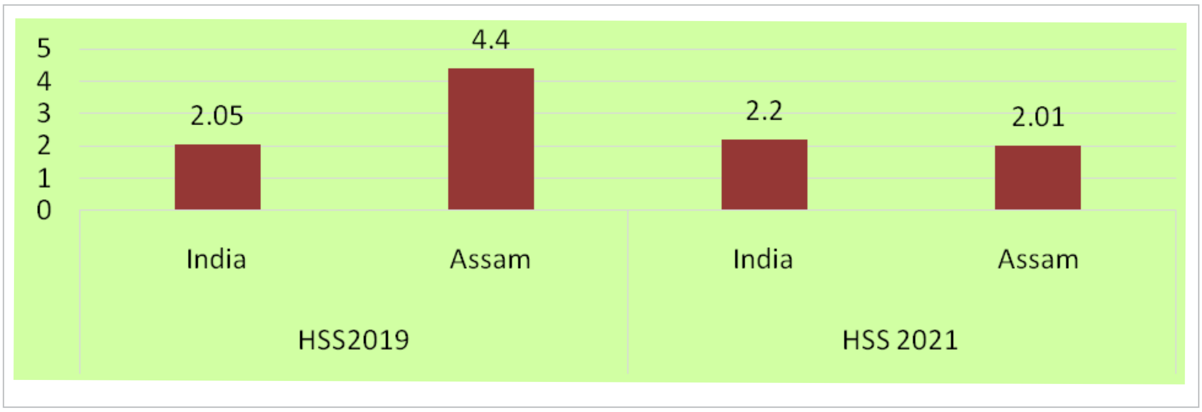
Observation of the trend over time in HIV from HSS Plus 2021 & 2019 in Assam:

HIV sero-surveillance which was initiated in 1985 has evolved over the years as one of the most fundamental strategic information functions, facilitating evidence-based decision making under the National AIDS and STD Control Programme (NACP) of the Government of India. The report reveals a higher prevalence of HIV and STI-related risk behaviours, relatively lower knowledge and service uptake, and a higher prevalence of HIV and Syphilis among prison inmates, as compared to the general population.

The pattern of HIV/AIDS awareness, transmission risk through used needles, and comprehensive all-round knowledge, was almost similar among convicts vis-à-vis undertrials. In India, HSS Plus 2021 revealed 46.5% of inmates were never tested for HIV, with a similar trend witnessed in the state of Assam 46.9%.

The prevalence of HIV infection among prisoners nationally during both rounds was observed to be 2.05% in 2019 and 2.22% in 2021, while in the case of Assam, it was it was 4.4% and 2.01% respectively.

Figure-1: HIV Sero-prevalence among immates(%)



Socio-demographic profile of inmates

Out of the total inmates interviewed, 74% inmates were undertrial and 26% convicted. The majority with 86% of inmates were in the age group between 20-49, 6% were between 50-59, and 5 % were below the age of 20.50% of inmates were married, 38% never married, and 12% were separated/divorced. About 43% of the inmates had education up to middle school, followed by receiving only primary education at 31%, matriculate at 13%, secondary at 8%, illiterate at 4%, with less than 1% of inmates having an education level of graduate and above.

Awareness on HIV/AIDS

Around 52.5% of inmates had heard about HIV/AIDS. There was significant association with inmates' occupation (Pearson's Chi square significance at 0.030). Only 23.9% of inmates could tell four major routes of transmission which are the sexual route, contaminated needles, men having sex with men, and through blood and blood products.

Inmates who have had sex

Out of total inmates, 83.3% have had sexual intercourse in their lifetime. Of these 67.1% were either married or separated/divorced, with the remaining 32.9% never being married. The association was found to be statistically significant as of the total inmates who were never married, 60% had sexual intercourse with multiple partners, with only 24.6% using condoms during their last sexual intercourse.

Substance use

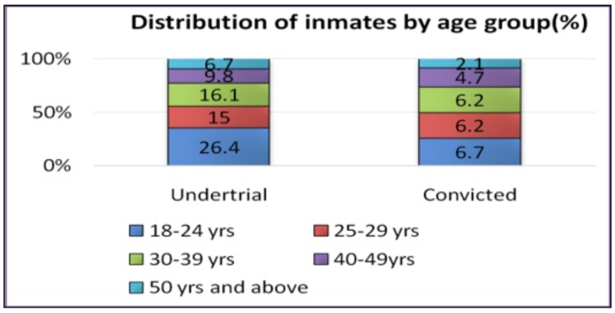
Around 49.5% of inmates are addicted to any of the identified substances. Out of these, 36.8% were addicted to tobacco, 17.2% to alcohol, and 36.2% used drugs including the use of intravenous drugs

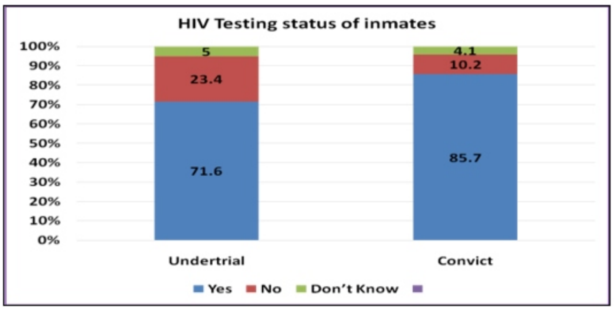
Service uptake

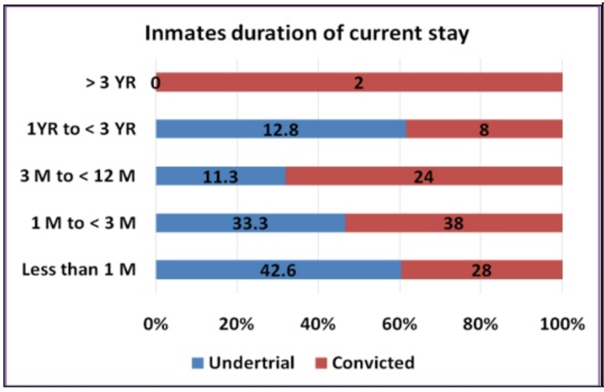
The HIV Testing status of inmates among the convicted and undertrials was found to be statistically significant. 71.6% of under trial inmates were tested for HIV whereas 85.7% among the convicts were tested for HIV.

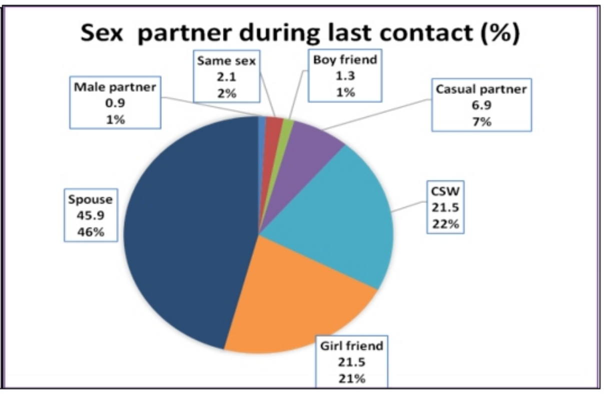
Morbidities (Illness)

Out of the total reported morbidities faced by the inmates, 34.3% raised complaints of suffering through any kind of illness. The majority reported to have psychiatric illnesses (20.6%), Diabetes (8.3%), Asthma/breathing problem (6.4%), Tuberculosis (4.4%), STI/HIV (1.9%), other musculo-skeletal and skin disease, etc.









CONCLUSIONS

The present study revealed the following observaions:

Majority of inmates are young between the ages of 20-49.

High number of inmates indulged in using/selling of drugs

There is a high number of inmates having sexual exposure who were never married

There exist multiple sexual partners of both married and never married inmates

Inmates show lack of consideration of the use of condoms and other preventive methods considering the vulnerability of spreading HIV infection to spouse and other partners.

Inadequate Knowledge of inmates regarding HIV infection and modes of transmission

Poor awareness about HIV status of inmates

High number of Intravenous drug users

RECOMMENDATIONS

Adequate Behavior Change Communication and counselling on HIV, drug abuse/addiction

Corrective and education measures during prison stay

Assimilation with society by appropriate vocational and rehabilitation training

Community outreach program for follow up after release from prison

Condom promotion among inmates who have multiple sex partners

Heightened importance of having integrated interventions for HIV and related co-morbidities.

Interdepartmental coordination among departments such as health, MWCD, MHA, Customs, Dept. of Revenue, Police Training Academy, Judicial Training Institute, medical institutions NGOs/ CBOs etc., in enhancing the access to HIV prevention and treatment services for people living in prisons and other closed settings.

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BASIC SERVICES

Prevalence of HIV Testing among Spouses and Factors Enabling or Deterring the Uptake of Testing among Spouses of PLHIV and ANC Clinic Attendees in Selected Districts of Haryana: A Mixed-Method Study

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INTRODUCTION

In the last decade, India has observed 33.3% decline in the number of HIV cases in the country. Although progress has been impressive, concentrated efforts must be made to meet the proposed 95-95-95 targets of UNAIDS. HIV remains majorly prevalent among high-risk groups in India, namely – female sex workers (FSW), men who have sex with men (MSM), people who inject drugs (PWID), migrant workers, truck drivers, and the transgender community. Spouses and partners of high-risk groups constitute the bridge population that remain ignored. Many studies have highlighted that spouses of PLHIV are at a higher risk of infection even if they do not engage in high-risk behaviour themselves. HIV testing, however, remains low in this vulnerable group due to various reasons, and research to elicit the barriers and facilitators to HIV testing among them remain sparse. It is of immediate concern to explore the status of HIV testing among the spouses of PLHIV and Antenatal Clinic (ANC) attendees in India to understand the vulnerabilities of these groups and expand HIV prevention and care to achieve the 95-95-95 target of 2025. Haryana is a north Indian state having 0.22% HIV prevalence among adults and is under-researched in context to the theme of this study.

OBJECTIVES

To study the prevalence of spouse testing for HIV among PLHIV and ANCs in determining the socio-demographic correlation

To explore the facilitators and barriers to HIV testing for spouses

METHODS

A mixed method design was used with cross-sectional type for quantitative analysis and phenomenology for qualitative analysis. The study was conducted at Anti-Retroviral Treatment (ART) centres, Integrated Counselling and Testing Centre (ICTC) and Antenatal clinics of four districts of state of Haryana, namely, Faridabad, Gurugram, Palwal, Mewat, among married PLHIV including ANCs aged 18 years or above. The study duration was of 3 months (November 2022-January 2023). For quantitative data collection, a semi-structured, self-administered questionnaire was administered to PLHIV at the ART/ICTC and pregnant females attending Antenatal Clinics (ANC). For qualitative data, in-depth interviews (IDIs) were conducted among PLHIV, their spouses, and health staff of selected ART/ICTC centre and ANC attendees. To generate the most conservative sample size (Quantitative Component) the study assumed a prevalence of 50% in the population and at 5% absolute error and 95% confidence interval, the estimated sample size was 385 however, the study included 406 PLHIVs. 241 ANCs were enrolled from the selected districts using purposive sampling. IDIs were conducted until thematic saturation was obtained. Descriptive statistics were used to analyse the sociodemographic indicators, and prevalence of HIV testing. The association of HIV testing and sociodemographic characteristics were examined using Chi-square test, t test, and Mann Whitney test depending upon the normality of data. Selected factors on bivariate analysis with ANC spouse testing as outcome variable were subjected to logistic regression analysis. Ethics approval was obtained from the Institutional Ethics Committee vide number IEC 134X/11/13/2022-IEC/18.

FINDINGS

406 PLHIV were interviewed and a majority of them were males (60.8%). Mean age of participants was 38.46 years (±2SD, 11.37) and that of their spouses was 37.35 years (±2SD, 11.29). Around 97.8% (95% CI:97.7-97.8%) of the spouses were tested for HIV and majority of them were advised by counsellor of ICTC or ART centre. The prevalence of spouse testing was significantly ($p<0.001$) higher among rural PLHIVs than urban (96.7% and 78.6% respectively). Spouses of all the truck drivers (PLHIV) were tested for HIV. Mean age of PLHIVs and their spouses who did not get tested was higher than those who were tested. Association between spouse testing and awareness about partner's HIV status was statistically significant ($p<0.001$).

On qualitative analysis, major themes which emerged as motivating factors for spouse testing as perceived by PLHIVs were knowledge and positive attitude towards testing, self-efficacy of PLHIVs, and accessibility and availability of services at a facility. Non-disclosure of HIV status to family, friends, relatives, neighbours, and colleagues, and non-support from partner and family were barriers for spouse testing.

“We all are literate; we all know about the disease. That's why when I came positive, I took my wife for testing.” (PLHIV 2, Gurgaon)

“Now my life is full of struggle but no problem. Now when I have got the illness I will take medicine, rest I have left on God.” (PLHIV 1, Faridabad)

“I was numb when I came positive but the staff here is very good, they were very supportive. They took good care of me and motivated me to get my spouse tested. I fully believe that my staff will only do what is good for me” (PLHIV 7, Palwal)

“Neighbours know, and they taunt; their behaviour has changed; now they hesitate to sit with me or have food with me.” (PLHIV1, Mewat)

“Although my wife knows that I was transfused blood, but still she can have doubts that I cheated her.” (PLHIV 10, Palwal) The mean age of antenatal cases was 24.73 years (2SD, 3.99). Of the total 241 ANC PLHIVs, 88.1% were tested for HIV in the current pregnancy and 75.5% of them were tested in all pregnancies. Pre-test counselling was reported in 55.9%. Around 2.5% were found HIV positive. Further, 36.9% (95% CI: 36.7%-37.1%) of the spouses of antenatal women were tested in current pregnancy and 1.7% of them were found HIV positive. On logistic regression analysis, antenatal women attending antenatal clinic (4.04 (1.15-14.12)) and those in the first trimester (3.28 (1.23-8.75) emerged as an independent factor favouring spouse testing. On thematic analysis major themes that emerged as determinants of spouse testing for HIV were knowledge and attitude towards HIV infection/testing, accessibility and affordability of services and social norms/experience.

“I have not even heard about HIV; I don't know anything about it.” (ANC1, Mewat)

“Staff just tells to get tested and don't tell anything else.” (ANC2, Gurgaon)

“It takes a full day to get tested; I have to leave my work which becomes difficult as we don't have much money.” (ANC3, Palwal)

“Husband did not cooperate, did not get tested.” (ANC4, Palwal)

In-depth interview of health care workers on their perception of spouse testing were analysed thematically. Knowledge and attitude of patients and their spouse, support in disclosing to partner, having good rapport with staff, trusting the staff, confidentiality of services and assurance of being safe or taken care of enhanced the likelihood of getting their spouses tested.

“ANC are illiterate, they have no opinion of their own, they can't even tell contact number of husbands.” (Health Worker 2, Mewat)

“People don't want to enter this building owing to fear of being identified and judged by their known ones.” (Health Worker 2, Gurgaon)

“Husbands avoid, say it's wrong number. They say that they are fine, they have no such illness, and they need not get tested. If wife is positive, it becomes difficult to catch their husband.” (Health Worker 2, Mewat)

“Patients don't come even on confirmation of the diagnosis, they know of their status still don't come, they tell us to not stress them. But when they fall severely sick, they beg us to test and treat them.” (Health Worker 2, Palwal)

“Patients get discriminated and fired from job; labours don't tell as have to earn.” (Health Worker 4, Faridabad)

CONCLUSIONS

Spouse testing for HIV among PLHIV was 97.8% and in ANC was 88.1% (current pregnancy). Majority of the PLHIV were advised by counsellor of ICTC or ART centre for spouse testing. Key facilitators were literacy, positive attitude towards disease/testing, provision of adequate, timely and good quality services, empathetic staff attitude in government health facilities and supportive role of family and peer educators. Major barriers were fear of testing positive, being stigmatized and difficulty in accessing health facilities. Addressing these barriers could significantly improve HIV testing uptake among priority populations.

RECOMMENDATIONS

To improve spouse testing for HIV, it is imperative to take measures to raise the awareness of priority population and strengthen healthcare facilities, including capacity building of the counsellors in pre-and-post testing counselling to address client issues empathetically and effectively.

ACKNOWLEDGEMENTS

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Factors Influencing the Gap in HIV Testing of Partners in Jharkhand: An Operational Research

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INTRODUCTION

HIV affects millions of people worldwide, especially vulnerable populations. Despite lowering new infections, epidemic targets have not been met. India, despite its overall low prevalence, faces challenges in meeting these targets, particularly in heterosexual transmission. Recent data from India indicates that sero-discordant couples often avoid testing due to fear, prejudice, and concerns about divorce. This study sought to determine the number of HIV-positive clients whose partners were not tested for HIV and to profile index cases by sociodemographic and clinical traits associated with partner non-testing. The objective is to understand partner testing's perceived facilitators and barriers and offer health-care provider-focused solutions for improving testing.

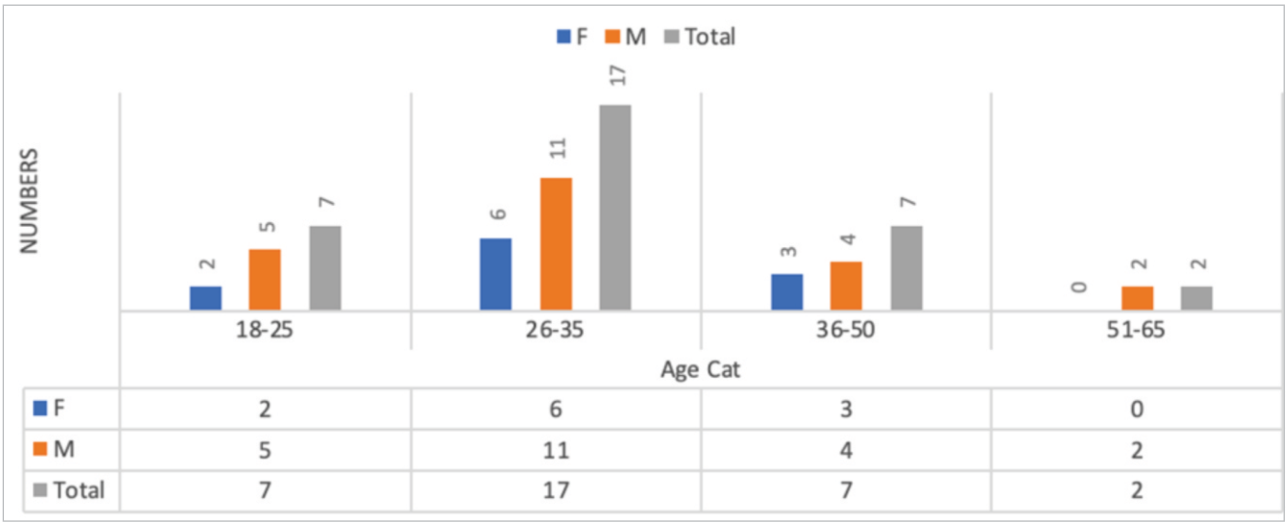
METHODS

The study was approved by the Institutional Ethics Committee of SNMMCH (expand SNMMCH). An explanatory mixed-methods design was used with a quantitative phase, including data-based retrospective and prospective cross-sectional study, followed by a qualitative phase including one-on-one interviews and FGDs. ART centres in Bokaro, Dhanbad, and Giridih were involved to conduct the study. A convenience sampling frame was used for HIV-positive consenting adults. Out of 35 individuals interviewed, two left mid-study, resulting in 33 participants for the focused group discussions and key informant interviews. Study was done from November 2022 to March 2023. After piloting, pre-designed, pre-tested questionnaires were used. With participant consent, quantitative data were entered into structured Microsoft Excel sheets and recorded on handheld devices. Assessing data parametricity preceded data analysis. Data was expressed using central tendency, and relevant tests, like chi square, were utilized to determine relationship. Data was analysed using JASP 2.0 and a p-value of less than 0.05 was considered statistically significant.

FINDINGS

SOCH portal and ART centre Excel files were accessed from January 2020 to March 2022. While the SOCH portal data was consistent, it had several blank columns. The accessed excel based master Line List of HIV-positive patients does not noted sero-discordancy. 33 newly diagnosed patients were contacted numerous times and invited to their district ART centres for FGD while our trial was continuing.

Figure 1. Description of participants as per Age Group (in years) and their Gender



	18-25	26-35	36-50	51-65
🟦 F	2	6	3	0
🟧 M	5	11	4	2
■ Total	7	17	7	2

Over 80% of the participants were from rural areas and having low literacy rates. 24 of 33 participants were aged between 18 to 35 years. The index case determines HIV-positive patients' behaviour. Women who received an HIV-positive diagnosis before marriage are discriminated against, left to fend for themselves, and compelled to live with their mothers. If the male was diagnosed initially, females were always concerned about the partner's health. ANC screening found nearly 80% of HIV-positive women. Most male clients were diagnosed after a long-term illness prevented them from working. They were later diagnosed with HIV at other hospitals. MSM participants expressed little concern about safety and reported having few male companions. They indicated that not all their partners underwent testing. Three participants were widowed.

FGD and KII research revealed HIV-positive people face social prejudice, stigma, and a lack of awareness regarding transmission methods, especially among low-educated and low-socioeconomic groups. Through FGDs and KIIs, it was revealed that HIV-positive individuals encounter social prejudice, stigma, and a knowledge gap about transmission methods, particularly among those with lower education and socioeconomic status. Few verbatims provided by the respondents were as follows:

“Humari galti nahin hai iski saza humare baccho ko kyon mile?” From a female participant.

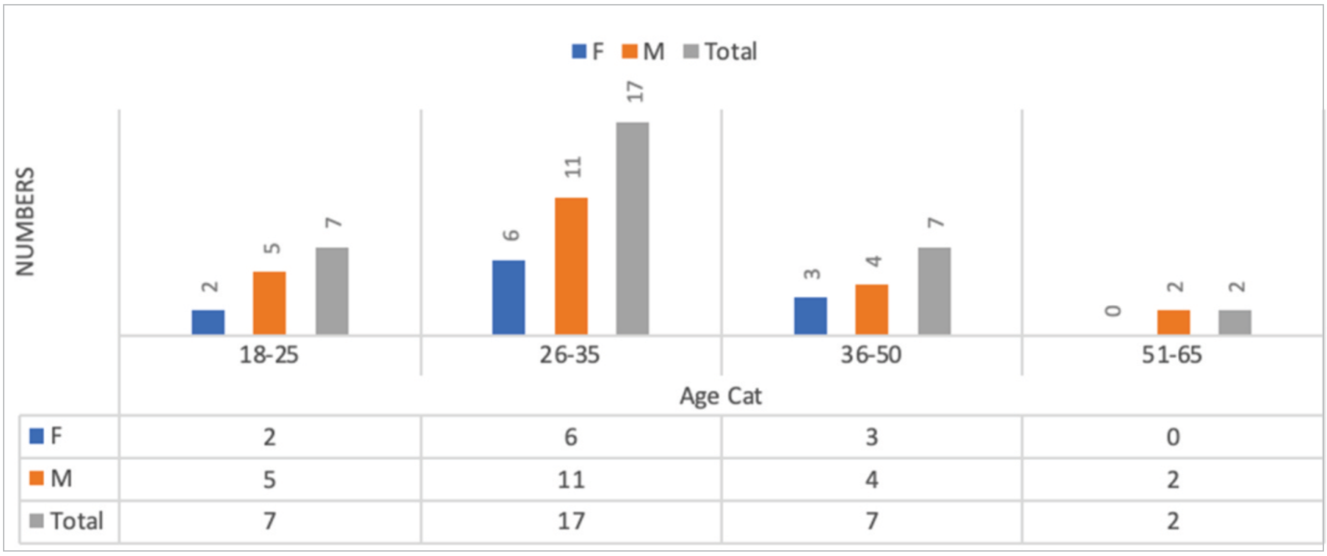
“Samaj mein jagrookta nahin hai khas kar ke gaon side mein wahan jagrookta bahut zaroori hai ki HIV kaise failta hai” from a male participant.

“Mere samney maine dekha ek mahila ko us samj ke logo no ne mil ke beijjati ki jab pata chala ki wo mahila HIV psotitive hai, ye ghanta sirf chah mahine pehle ki hai'' From a male participant.

“Suna hai pension jo milega uska verification karne log ghar pe aatein hain, aise to sabko pata chal jaega ki wo HIV positive hai aisa nahin hona chaiya” From a male participant

A significant 98% of our participants had a lower economic status. In HIV-positive women's marriages, prejudice, violence, and neglect is common. All HIV-positive patients we spoke to were satisfied with government centre services, health professionals, and behaviour. Motivated system staff lamented the shortage of doctors. 1% were HIV-positive. (504,1%) of 51,061 ICTC cases. HIV cases dominated the age group 19-35 years (42.70%, 215). ART centres with HIV-positive patients (n=1166) showed heterosexual transmission (1073, 92.00%). We found 344 couples with partner statuses. Only 102 of 344 sero-discordant patients highlighted inadequate data curation.

Figure 2. Description of Sero status of the participants



	18-25	26-35	36-50	51-65
F	2	6	3	0
M	5	11	4	2
Total	7	17	7	2

CONCLUSIONS

Major factors contributing to the rise of sero-discordant couples include stigma, discrimination, knowledge gaps, limited testing access, gender inequality, fear of violence, migration, and doctor availability. More barriers are related to the society rather than health care settings as of now. HIV-positive patients expressed satisfaction with the services received from ART centers. Migrant workers require enhanced training and materials to understand HIV transmission methods and prevention.

RECOMMENDATIONS

Short-term recommendation: Ensure doctor availability in all ART centres and enhance data quality on portals. It's essential to monitor and support all data collectors and operators for maintaining data standards.

Midterm recommendation: To ensure data accuracy and relevance, stakeholders should undergo capacity-building refresher courses. ART centres can improve patient welcome, waiting, and atmosphere. Visits to patients' homes should respect privacy for financial or other benefits. IEC or refresher outreach should teach migration workers how to catch and spread infection. Sero-discordancy needs more study.

Long-term recommendation: Emphasize that HIV education efforts should aim to reduce discrimination, gender inequality, and fear among HIV-positive individuals. Enable last-mile outreach. Engaging NGOs and political leaders to help HIV-positive patients understand that taking their ART drugs may contribute equally to society's progress helps foster empathy.

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Partner Non-Testing and its Associated Factors among PLHIVs Registered in ART Centers in Kerala

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INTRODUCTION

National Strategic Plan for HIV/AIDS and STI (2017-2024) is developed with a vision of an AIDS-free India. Sexual or drug-injecting partners of individuals diagnosed with HIV often have a heightened likelihood of being HIV-positive themselves. Testing Together (TT) or Couples HIV Testing and Counseling (CHTC) is a public health strategy existing in the African continent wherein two or more persons who are in or planning to be in a sexual relationship receive HIV testing services together. It has improved HIV prevention outcomes on the continent.

Assisted HIV partner notification services are a simple and effective way to reach these partners, many of whom are undiagnosed and unaware of their HIV exposure and may welcome support and an opportunity to test for HIV. Facilitating engagement of partners with Integrated Counselling and Testing Centres (ICTCs) and their testing services is essential in reducing transmission and ensuring timely detection of HIV among populations at higher risk. Assisted HIV partner notification services aim to connect with the spouse, sexual and drug-injecting partners of people diagnosed with HIV infection and the biological children (under 19 years of age) of women living with HIV (WLHIV), given their increased risk of acquiring HIV.

OBJECTIVES

To estimate the prevalence of partner non-testing among PLHIVs registered in ART centres in Kerala from 2020 to 2022.

To determine the factors associated with partner non-testing among PLHIVs registered in ART centres in Kerala from 2020 to 2022.

To compare high and low performing ICTCs for partner testing in terms of infrastructure and administrative support received by ICTCs.

To assess the training needs of ICTC counselling in promoting partner testing among PLHIVs.

METHODS

Study design: The study employed a mixed method approach. For the first objective, a cross-sectional study design was employed to estimate the level of partner non-testing among PLHIVs. For the second objective, a case-control design was employed. For the third and fourth objectives, a qualitative study was conducted.

Study setting: For the first and second objectives, the ART centres were chosen as the study setting. For the third objective, the ICTCs and for the fourth objective along with the ICTCs, ART centres/KSACS/DTO (District AIDS Control Society) were selected.

Sampling: For objective 1, all new PLHIVs who have registered at the ART centres from 2020 to 2022 were selected through the census method. For objective 2, four ART centres namely Trivandrum, Thrissur, Ernakulam and Kozhikode were initially selected purposively. However, no informed consent was received from any of the centres. Therefore, the available secondary data obtained for the fulfilment of objective 1 was used for further analysis. A total of 1621 PLHIVs were recruited for the analysis. Among 1621, 466 and 1155 PLHIVs were categorized as cases and controls respectively, where controls are PLHIVs with at least one partner tested for HIV and cases are PLHIVs with no partner tested for HIV.

For objective 3, 10 ICTCs were selected based on partner testing performance to include 5 centres with high and 5 with low partner testing rate through purposive sampling. ICTC counsellors and senior programme officers were the study participants.

For objective 4, purposive sampling was employed for selecting the participants for eliciting responses from both provider and client perspectives. For the provider perspective, ICTC Counsellors, ART Centres MO, and KSACS/DTO (District AIDS Control Society) programme officers were the population, from which a programme officer and ART MO were selected for an in-depth interview; and the ICTC counsellors were selected for Focus Group Discussion.

For the cross-sectional and case-control study (Objective 1 and 2), the secondary data from the Management Information system (White card) data frame was used for the data analysis. For objectives 3 and 4, interviews were conducted which were then transcribed and translated for analysis. For objective 3, an interview guideline and observation checklist (checklist for the institution which includes HR, infrastructure, ownership, access, and checklist for observing counselling) were used. For objective 4, an interview guideline was used to conduct the interview among programme officers.

FINDINGS

Out of the total PLHIVs the partner non-testing rate is 49.2%. Among the ART Centres the highest proportion of partner non-testing is found in GH Ernakulam (63%) and the least proportion in Wayanad (28.6%). Due to factors including age or having no sexual partners and having a mode of transmission other than non-sexual, as determined by the ART Medical Officers, some PLHIVs who had not yet tested their partners were declared ineligible for partner testing. There were a total of 1488 PLHIVs (51%) with partners tested for HIV. Out of the tested partners, 51.5% turned positive and 48.5% turned negative for HIV, which indicates that if partner/s of PLHIV were traced and tested one out of two tested will be positive for HIV.

Among the total 2927 PLHIVs,1304 PLHIVs were excluded from detailed analysis due to incomplete data. The remaining 1623 PLHIVs were analysed further. Of the 1623 PLHIVs, the mean age (SD) was found to be 45.2 (11.2).

A total of 1289 of the PLHIVs (79.4%) lived with a partner and 334 (20.6%) were living alone. There were 321 (19.8%) PLHIVs belonging to high-risk groups (HRGs) which included Men Who Have Sex with Men (MSMs), transgender, migrants, intravenous drug users (IDU). 1549 (95.4%) reported the mode of HIV transmission was sexual and 74 PLHIVs (4.6%) reported non-sexual means such as vertical transmission, unsterile tools, or blood transfusion. Out of the analysed PLHIVs, partners were tested in 1157 PLHIVs (71.3%) and 466 (28.7%) were not tested. Among the total, 1101 (67.8%) of the PLHIVs were early HIV detectors while 522 (32.2%) were late HIV detectors. Out of the 1623 PLHIVs, 2 were from the minority gender category and both were found to have their partner tested. Hence, the remaining 1621 PLHIVs were analysed further.

Compared to younger adults, it is found that adults are at more risk of not getting tested (OR=1.9). The females have higher odds of not testing their partners (OR=1.3) than male PLHIVs. PLHIVs with current partners have lower odds of not testing their partners (OR= 0.05) than PLHIVs who are currently single. PLHIVs belonging to the general risk category have lower odds of not testing their partners (OR= 0.7) than PLHIVs who belong to the high-risk group. The late-detected PLHIVs have higher odds of not testing their partners (OR=1.3) than early detected PLHIVs.

From the qualitative interviews, it was gleaned that more outreach activities such as camps were conducted by high-performing ICTCs. Low-performing ICTCs struggled to maintain confidentiality during counselling sessions due to space constraints. Most of the high-performing ICTCs were located closer to the Tuberculosis Unit (TUs) which enabled the patients to have easy access for TB screening and TB patients to screen for HIV.

With regards to training needs, ART MOs reported that a lot of knowledge and skills required for effective performance in their role were acquired through on-the-job learning, without any formal induction training or frequent offline trainings. Several online trainings were also received. Counsellors, however, reported receiving regular training. Overall, the counsellors opined that they required more refresher training for dealing with partner testing, especially in cases of partners who were not spouses. Training on ways to build patient trust around confidentiality was deemed to be a necessity since the counsellors' face difficulties in convincing those who have tested positive to get their partners tested.

CONCLUSIONS

The study's results have offered significant and perceptive insights into Kerala's current situation of partner testing among PLHIVs. It was found that, one in two partners of PLHIV was found to be positive for HIV. Also, the factors associated with partner non-testing included age, gender, partner status, risk group, and HIV clinical staging of the PLHIVs. In terms of administrative support, high-performing ICTCs carried out more outreach initiatives, such as night camps and tribal camps. In terms of the infrastructural facility, both high and low-performing ICTCs had adequate space, but low-performing ICTCs struggled to maintain confidentiality during counselling sessions. Most of the high-performing ICTCs were located closer to the Tuberculosis Unit (TUs) enabling easy access for patients to screen for TB and vice versa. Effective plans for future training are recommended by the participants for ASHA workers. Counsellors have opined for more refresher training and MOs for induction training. To improve partner testing rate, more focus must be given to IEC materials.

RECOMMENDATIONS

The study came out with a few recommendations for training, awareness generation, and IEC materials. The ART Medical Officers require induction training and more frequent offline or hybrid mode training, especially for improving partner testing. Training of doctors in both the government and private sector for AIDS awareness generation could also be initiated to increase routine screening to improve case detection and referrals to ART centres. Once, the person is tested as HIV positive, the ART counsellors have better access to them and thus, the counselling for partner testing can be done well by ART Counsellors. Necessary training should also be provided to the ART counsellors. Since IEC has more influence than individual counselling sessions to improve the overall partner testing rate, robust IEC techniques must be developed.

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Compliance to Targeted Interventions as a Determinant of Sustained Desirable Sexual Health Behaviour (SDSB) among Men who have Sex with Men (MSM) in Kerala

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INTRODUCTION

The Targeted Intervention (TI) project under the National AIDS Control Programme in India addresses the health care needs of sexual minorities. Men having sex with men (MSM) form an important vulnerable group amongst its beneficiaries. Kerala aims to achieve equity in caring for its sexual minorities, while also addressing its medical and social issues through novel policies and interventions. Given the significance of MSM individuals in this context, this study in Kerala aims to determine if compliance to TI promotes sustained desirable sexual health behaviour (SDSB) among MSMs. This would indirectly supplement evidence of the effectiveness of the programme amongst this group. In this context, it was also deemed essential to understand the unique challenges and needs of MSM populations to develop effective strategic innovations to enhance the effectiveness of the TI programme. By addressing the root causes of STI transmission in MSM population and providing support, we may be able to take steps to reduce STIs and promote sexual health. There is dire paucity of literature in this arena and this study is anticipated to pave way towards fortifying the direction in which the TI programme may be promulgated.

METHODS

This study used a mixed methods approach, involving qualitative and quantitative methods. A case control design was adopted within the context of cross-sectional study for the quantitative part, prior to which a qualitative study comprising of implementors' FGDs was conducted to define SDSB and identify the factors that had an influence on SDSB. Stakeholder (implementor and beneficiary) challenges were identified through these FGDs as well as IDIs. There were four FGDs in two districts with the TI providers, and ten in-depth interviews among five MSMs having desirable sexual behaviour and five among those having undesirable sexual behaviour. The quantitative study was conducted in five chosen districts of Kerala, ensuring geographical representation.

FINDINGS

Out of the 708 participants, 84% exhibited SDSB, while the remaining 16% served as controls. Compliance to TI project was not found to be a significant factor in sustained desirable sexual health behaviour (p vale-

0.05 and OR = 3.329, 95% CI = 0.991 - 11.1). Compliance to the TI project was defined as MSMs accessing at least 80% of clinical services and meeting 80% or more of their condom needs over the past two years through the project. Of the total, 112 (15.8%) met these compliance criteria, while the majority, 596 (84.2%), did not. Factors significantly influencing SDSB included average monthly income, age at first sexual encounter, frequency of alcohol consumption during sexual acts, financial transactions related to sexual acts, and the total number of sexual interactions in the preceding month.

Programmatic challenges included difficulty in identification and tracking of MSMs, especially migrants and hidden MSMs' profile legitimacy on social media. Since adolescents were not included in TI, they could not be provided services.

“A lot of MSM activity is seen among youth with initiation being reported as early as 13-15 years of age”- TI project staff

Shortage of human resource, and meagre salaries were seen to demotivate work.

“In spite of being paid only Rs.3000/- a month, we are often forced to bear the travel expenses of the MSMs that we bring into the project, to and from the centres and other testing locations.”- said a Peer Educator

The lack of capacity among the health care providers/professionals to be queer-affirmative and identify health problems of MSMs was prominently highlighted in the study.

“I had taken a person to a hospital with great effort after convincing him, and there the doctor went on to say that men having sex with other men is wrong. This was at an ICTC centre in a Medical College”- shared a TI site staff

“Even senior physicians merely look for the presence of discolouration, black spots close to the legs, without any internal examination. In cases where pus and discharge were found, appropriate medications were not provided”- said a Peer Educator

Challenges faced by beneficiaries regarding consistent condom use were decreased sexual pleasure, commercial benefits of condomless sexual activity, and substance abuse.

“They (clients) offer huge amounts like Rs.6000/- for indulging in condomless activity, instead of Rs. 3000/- with condoms”- stated a Peer Educator from a TI site

“New clients from a bus stand or a railway station, may not be willing to use a condom even though I do not practice condomless sex. But then, there are instances when we have to do it...like, in situations where the client may be drunk. So, in such cases, it may lead to HIV, STDs...." - retorted an MSM individual

Difficulty in procuring condoms from TI projects due to project hours coinciding with work was also reported.

“If I don't have work commitments (personal), I go (to the project site) and avail services”- stated a beneficiary

HRGs preferred a time beyond the usual office hours as some of them were unable to show up until after late evening for tests conducted at camps, for which they suggested extension of regular camp hours.

CONCLUSIONS

The study's results have offered significant and perceptive insights into Kerala's current situation of partner testing among PLHIVs. It was found that, one in two partners of PLHIV was found to be positive for HIV. Also, the factors associated with partner non-testing included age, gender, partner status, risk group, and HIV clinical staging of the PLHIVs. In terms of administrative support, high-performing ICTCs carried out more outreach initiatives, such as night camps and tribal camps. In terms of the infrastructural facility, both high and low-performing ICTCs had adequate space, but low-performing ICTCs struggled to maintain confidentiality during counselling sessions. Most of the high-performing ICTCs were located closer to the Tuberculosis Unit (TUs) enabling easy access for patients to screen for TB and vice versa. Effective plans for future training are recommended by the participants for ASHA workers. Counsellors have opined for more refresher training and MOs for induction training. To improve partner testing rate, more focus must be given to IEC materials.

RECOMMENDATIONS

- Train healthcare staff in queer-affirmative practices to enhance access and care for MSM individuals to ensure improved registration and retention in the programme. Develop awareness programs targeting the public for greater inclusivity towards MSMs, thereby reducing stigma which would create a safer societal space to come out and access services.

- Address the knowledge-behavior gap among registered MSMs by engaging influencers and promoting safe sexual practices. Improve condom usage by providing additional cues to action for MSMs.

- Enhance support for Outreach Workers (ORWs) and Peer Educators (PEs) and sensitize police personnel further, to ensure hassle free work and work safety. Provide supplementary training for intervention site staff to enhance service quality.

- Regulate TI centre's functional hours to be considerate to working MSMs' convenience.

- Conduct research on incestuous sexual activity's impact on sexual health and develop strategies. Explore alternative approaches for reaching school-going children engaged in MSM activity.

- Recruit experienced counsellors and support staff to improve care quality. Implement a need-based fund allowance system to retain and motivate staff. Establish a robust supportive supervision as well as monitoring and evaluation system for accurate data collection. Create clear communication channels and feedback mechanisms for staff and beneficiaries to enhance trust and program outcomes.

ACKNOWLEDGEMENTS

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Challenges Faced by Female Counselors in Providing HIV Testing and Counseling Services in Kashmir: A Qualitative Interpretive Inquiry

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INTRODUCTION

In India, HIV prevalence in adults (15–49 years) is estimated at 0.22%. The prevalence has declined from an estimated 0.54% in 2000–2001 to the current level of around (0.22%) with an estimated decline of 33.3%. Early testing and diagnosis are essential for HIV prevention, treatment, care, and other support services. There is a need for increased access to and uptake of HIV testing among at-risk groups. HIV counselling and testing services include pre-test and post-test counselling, informed consent, privacy, and confidentiality, among other services. An HIV/AIDS counsellor thus plays a crucial, albeit challenging role, in preventing and controlling HIV. People living with HIV (PLHIV) need emotional support in addition to clinical treatment. Counselling such patients comes with varied challenges, especially for female counsellors in the cultural context of Kashmir.

OBJECTIVES

Explore HIV/AIDS counsellor perspectives on the various challenges faced during the process of counselling PLHIV patients, inclusive of issues concerning obtaining consent, confidentiality, and managing disclosure.

Explore apprehensions of infection and discrimination faced by counsellors within and outside the workplace.

Analyse the lived experiences of female identified HIV counsellors in understanding their counselling experiences and the challenges of providing counselling services to patients.

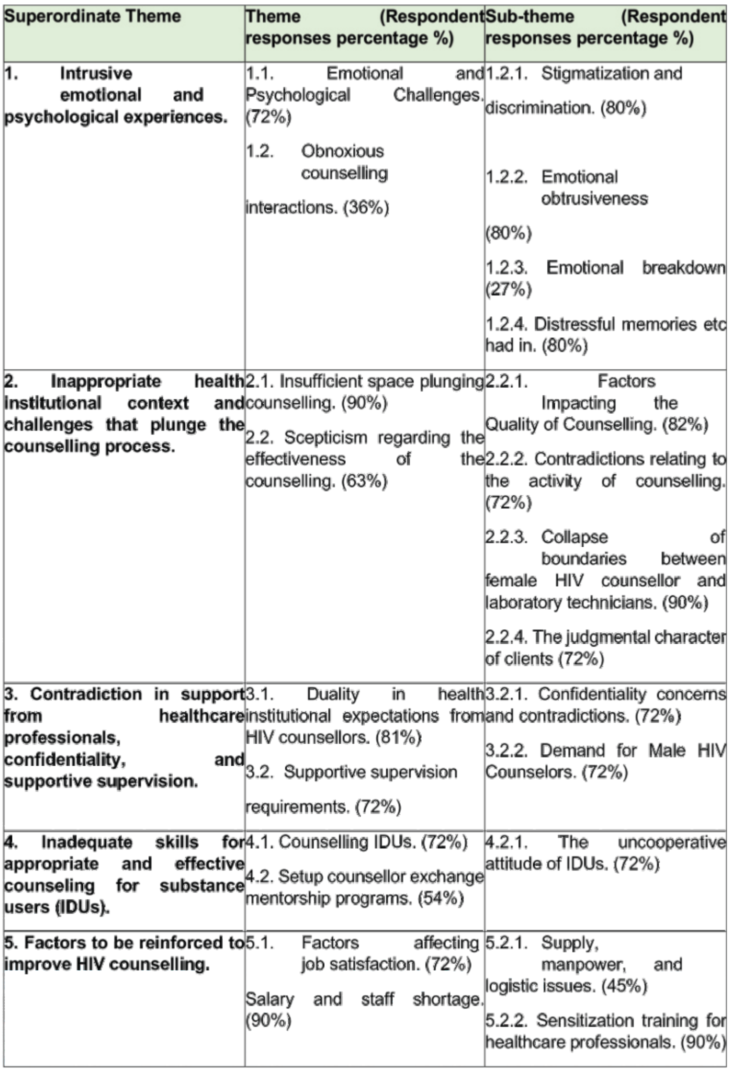
METHOD

In-depth interviews were conducted with eleven female HIV counsellors from different districts of the Kashmir Valley at their respective workplaces. Only one interview with a female HIV counsellor from Leh was conducted through a Zoom meeting at her convenience. The interview with the Leh (Ladakh UT) HIV counsellor was conducted on December 21, 2022, during winter, when the Srinagar to Ladakh road gets blocked due to harsh winter conditions. To facilitate the interview, an interview guide focusing on specific areas of interest was created beforehand. All interviews were conducted by the female researcher; interviews were audio-recorded after written informed consent was obtained from the respondents. Furthermore, memo writing was done by the second researcher during the interview. The interviews ended once all the intended questions and content in the interview guide were fulfilled. The maximum duration of the interview recorded was 1 hour and 10 minutes, while the minimum duration was 35 minutes. All interview recordings were transcribed verbatim and voice recordings with Urdu or Kashmiri content were translated and transcribed verbatim into English. Transcripts were assigned in MS Word files, and data analysis started as a process of carefully scrutinizing data by placing it into inductively created code structures, categories, sub-themes, and themes. The whole process of data analysis was conducted by the two researchers, who are well-versed in qualitative data analysis. They coded the transcripts, extracted meaningful statements, and formulated themes for the meaning of sentences. Data were analysed by adopting an Interpretive Phenomenological Approach (IPA). The six steps outlined by Smith and Osborn were followed for the data analysis. During the data analysis, the research team reached a consensus and agreed on the final super-ordinate themes, themes, and sub-theme.

FINDINGS

The data analysis generated five super-ordinate themes and many over-arching themes and sub-themes.

Table 1: Super-ordinate themes, themes, and sub-themes



Superordinate Theme	Theme (Respondent responses percentage %)	Sub-theme (Respondent responses percentage %)
1. Intrusive emotional and psychological experiences.	1.1. Emotional and Psychological Challenges. (72%) 1.2. Obnoxious counselling interactions. (36%)	1.2.1. Stigmatization and discrimination. (80%) 1.2.2. Emotional obtrusiveness (80%) 1.2.3. Emotional breakdown (27%) 1.2.4. Distressful memories etc had in. (80%)
2. Inappropriate health institutional context and challenges that plunge the counselling process.	2.1. Insufficient space plunging counselling. (90%) 2.2. Scepticism regarding the effectiveness of the counselling. (63%)	2.2.1. Factors Impacting the Quality of Counselling. (82%) 2.2.2. Contradictions relating to the activity of counselling. (72%) 2.2.3. Collapse of boundaries between female HIV counsellor and laboratory technicians. (90%) 2.2.4. The judgmental character of clients (72%)
3. Contradiction in support from healthcare professionals, confidentiality, and supportive supervision.	3.1. Duality in health institutional expectations from HIV counsellors. (81%) 3.2. Supportive supervision requirements. (72%)	3.2.1. Confidentiality concerns and contradictions. (72%) 3.2.2. Demand for Male HIV Counselors. (72%)
4. Inadequate skills for appropriate and effective counseling for substance users (IDUs).	4.1. Counselling IDUs. (72%) 4.2. Setup counsellor exchange mentorship programs. (54%)	4.2.1. The uncooperative attitude of IDUs. (72%)
5. Factors to be reinforced to improve HIV counselling.	5.1. Factors affecting job satisfaction. (72%) Salary and staff shortage. (90%)	5.2.1. Supply, manpower, and logistic issues. (45%) 5.2.2. Sensitization training for healthcare professionals. (90%)

Furthermore, some selected quotations from the respondent were included as follows:

"...They used to call me HIV (name)... whenever we move around, it feels bad, and I remember our colleagues whispering in disdain about us..."

"...He even sat unnecessarily close to me and made some lewd gestures. So, I got scared of this guy. I couldn't even say anything (numbed due to fear) to him then. He asked questions that he should not have asked, he was lewd, and I felt embarrassed. Maybe he had done such things before as well. It is still vividly in my mind, and it remains embarrassing..."

"...If we go to the labour room or wards to see a relative of ours, their reaction is that HIV people have come (HIV WALE AYA), as if we have brought in an HIV patient. We've been labelled as 'HIV wale (person)."

"...We have a problem with patient privacy. When patients come, we have to ask everyone else to leave that room, lock it, and then talk to him; the space is the main problem."

"...I think I am a data manager, counsellors have become data managers, I am not able to do counseling as I used to do it, I take help from my lab technician for counseling..."

"...maintaining 36 registers, maintaining daily registers, and uploading the data on SOCH. So, all these things have to be worked on by a single person. Had there been a data operator, he would have done that part. The counsellor would have done her part better and more effectively in counseling."

"...IDU (intravenous drug use/substance use) counseling is a challenging job; honestly, we are not well versed in it, and there should be someone to supervise and train us. "

"...Even if I tell the staff to not mention HIV positive on the mother's file, the staff on the next shift will again write the same on the file. Even in the NICU, the staff writes HIV-positive mothers on the cribs of these babies."

"...I want every healthcare professional, including ASHA workers and other health workers (doctors), to be given awareness through workshops; it will help in removing stigma and positively improving our work."

CONCLUSIONS

Female HIV counsellors are grappling with various emotional and psychological challenges. The counsellors experience stigma and discrimination at various levels, as evidenced by the respondents having shared their experiences with discrimination or stigmatization of one sort or another, both at the workplace and in their communities. The other challenges of significance that female HIV counsellors wrestle with are lack of privacy and space, lack of manpower, lack of supervision, lack of male HIV counsellors, lack of training, lack of HIV sensitization training of healthcare professionals, dissatisfying salary, lack of support from hospital administration, and lack of training in counseling substance users (IDUs).

RECOMMENDATIONS

- A thorough assessment is to be done to identify specific space and privacy requirements. Develop a comprehensive training program covering the latest updates in HIV counseling, substance use counseling, and recent advances in counseling.

- Establish regular workshops and seminars to update and sensitize healthcare professionals and doctors regarding HIV/AIDS.

- Design tailored training programs that address identified gaps in substance use counseling.
- Collaborate with addiction treatment centers to create a comprehensive training program that includes simulated or actual counseling sessions for substance users and HIV counseling.
- Establish cross-functional committees to facilitate regular communication and decision-making processes between HIV counsellors and hospital administration.
- Organize periodic peer-support sessions among counsellors to share experiences and provide informal supervision.
- Utilize online platforms to connect mental health professionals with counsellors to address psychological challenges.
- Address the lack of manpower and lack of male HIV counsellors by advocating for recruitment after a thorough human resources audit by the committee, as the integration of male HIV counsellors into the team aligns with the commitment to providing comprehensive and effective HIV/AIDS counseling.
- Align the salary of the HIV counsellors as per current inflation and requirements after doing a review of the current salary by a committee.
- Implement an open-door policy where HIV counsellors can voice concerns and suggestions with their concerned health administrators within the health facility.

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Enablers and Barriers for Reporting among Private Health Care Providers Enrolled in Public Private Partnership (PPP) model under Prevention of Parent to Child Transmission (PPTCT) cascade –A Qualitative study from Karnataka

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INTRODUCTION

Prevention of Parent to Child Transmission of HIV/AIDS (PPTCT) program was launched in India in the year 2002. It aims to prevent perinatal transmission of HIV from an HIV-infected pregnant mother to her new born baby.

Since January 1, 2014, PPTCT cascade services have been implemented to prevent HIV transmission. Pregnant women who test HIV positive are initiated on lifelong ART (anti-retroviral therapy) irrespective of CD4 count, and their new born babies are initiated on 6-12 weeks of Syrup Nevirapine and/or Zidovudine immediately after birth based on the viral load count of the mother. The HIV-exposed baby is initiated on Cotrimoxazole prophylaxis at 6 weeks and is tested for HIV DNA PCR at 6 weeks by DBS (dry bloodspot) collection. If the sample is positive for HIV DNA PCR, then a repeat sample is tested for HIV DNA PCR. A confirmatory test is done at 18 months and declared negative after that. An HIV-exposed baby is then initiated on lifelong, life-saving ART at the earliest if confirmed HIV-positive through a second DNA PCR test.1

NACP recognises and encourages partnerships and alliances with the corporate/public/private sector in eradicating every threat of HIV in India2. The program has been utilising innovative approaches to reach out and cover all pregnancies including through the private sector3.

To ensure the testing of all pregnant women, it is essential to involve the private sector through an established public-private partnership (PPP) model and a robust reporting mechanism which is also in place. With this background, this study was taken up to assess the motivators and barriers for reporting in the PPP model under the PPTCT cascade.

OBJECTIVE

To assess enablers and barriers for reporting from the private health care providers enrolled in the public-private partnership model under Prevention of Parent to Child Transmission of HIV/AIDS

METHODS

This is a qualitative study conducted in Bangalore's urban district in five zones (talukas), namely Bangalore South, Bangalore North, Yelahanka, KR Puram and Anekal4. From each of these talukas, one regularly reporting, one irregularly reporting, and one non-reporting PPTCT site were selected. After obtaining permission from the Karnataka State AIDS Prevention Society (KSAPS), Institutional Ethical Clearance was obtained.

The private centres reporting HIV in Karnataka are divided into reporting sites, irregular reporting sites, and non-reporting sites. Those centres that sent reports regularly in the past year were termed as regularly reporting (161 sites), those that sent reports infrequently were termed as irregularly reporting (91 sites), and those that did not send reports in the past year were termed as non-reporting (77 sites). Using simple random sampling and random number tables, one site from each regular reporting, irregularly reporting, and non-reporting centres from each of the five zones of Bangalore urban districts—for a total of 15 sites—were chosen from a total of 329 PPP sites in Bangalore urban districts. Semi-structured interviews in the local vernacular language were conducted using pre-tested and pre-validated interview guides by trained field investigators.

Prior intimation was provided. The reporting personnel for HIV such as data entry operators, pharmacist/laboratory technicians/staff, nurses, and senior consultants who were conducting the reporting were interviewed.

A total of 15 PPTCT centres participated in the study and semi-structured interviews were conducted. The timings of the interview were informed prior and the trained field investigators interviewed the personnel in charge of reporting. Data was collected on their experience, factors that would allow for better reporting, difficulties, and information with respect to the available infrastructure and resources. Any suggestions and recommendations were recorded. Supervisory visits were conducted by the principal investigators.

The confidentiality of the data was maintained, and the data was locked and kept safely in the cupboards. Data was not used for any other purpose other than this study. Data was translated and transcribed. Atlas-ti software was used for the analysis.

FINDINGS

Out of the 15 participants in the study, 8 participants were lab technicians, 3 were typists, 1 lab supervisor, 1 administration, 1 lab director, and 1 clinical psychologist.

Lab technician: 'I do Biochemistry and Clinical Pathology. I also work in Reception'.

'I do type work. I type the discharge summaries, death certificates, wound certificates...

In the study, 7 (46.67%) of respondents were female, while 8 (53.33%) were male. Most of the participants had not undergone any formal training in HIV reporting. Most of the participants had received training from senior staff 7 (46.66%) and 3 (20%) participants had not received any training.

'No.... no training for reporting.'

Out of the study participants, the majority have replacements for reporting to work constituting 14 (93.34%). Only one participant doesn't have a replacement.

'Two people to replace on rotation basis...both are lab technicians.'

Most of the study subjects 8 (53.33%) had a separate computer system with an internet facility for HIV reporting. The rest of the people are entering the common computer.

'Separate one system is there. Good network connection is also there...'

Most of the respondents' health facilities did not have a separate register for HIV reporting. A common register for cases was used for HIV reporting; 7(46.66%). No register was maintained in 2 (13.33%) facilities.

'No separate register... we just highlight in the main book as Retroviral Disease....'

The study subjects were asked about what enabled them to report effectively. Most of the participants opined that it was to enable the prevention of transmission of HIV in the community.

'Eradication I must have my hand in it...this disease was there longer than me... So, I must do what I can.it is my responsibility too... Social responsibility. As part of humanity...'

Some of the participants believed a proper reporting format would be a very important motivator for effective reporting.

'Format is needed......if the format is given 100%...confirmation... we can do.'

For some of the participants, reporting HIV cases was a method of rechecking and verification, to make sure that no cases were missed.

'Positive cases are rechecked with alternate methods. And reports will be released only on confirmation...'

Proper infrastructure, staff support, and adequate lab facilities were also important motivating factors for the efficient reporting of HIV cases.

'Good lab facilities. Usually, it is a kind of service... I think. I make sure that correct report is given...a part of job.

The biggest barrier to reporting HIV cases in the case of most of the subjects was that they were unaware they had to report. Some of the participants only came to know about the reporting system due to the current study.

'We don't know that we had to report to IHIP...we don't even have the format...

Some participants believed training had not been given. Hence, reporting is cumbersome and difficult.

'Training I have not had...'

Another subject opined that the counselling process and the communication process of the reporting must be improved. The privacy of the patient should be of the utmost importance.

‘Cases get positive. Quick action must be taken. government should take quick action. Counselling must be there... from the government side... they can call on the phone, where are they are they ok... like that... they should do it properly... there should not be any panic or tension.... Friendly they should be...not very strict...they should do swift action... privacy of the patient should be maintained...'

Figure 1: Distribution of motivating factors among regular reporting sites, irregular reporting sites, and non-reporting sites

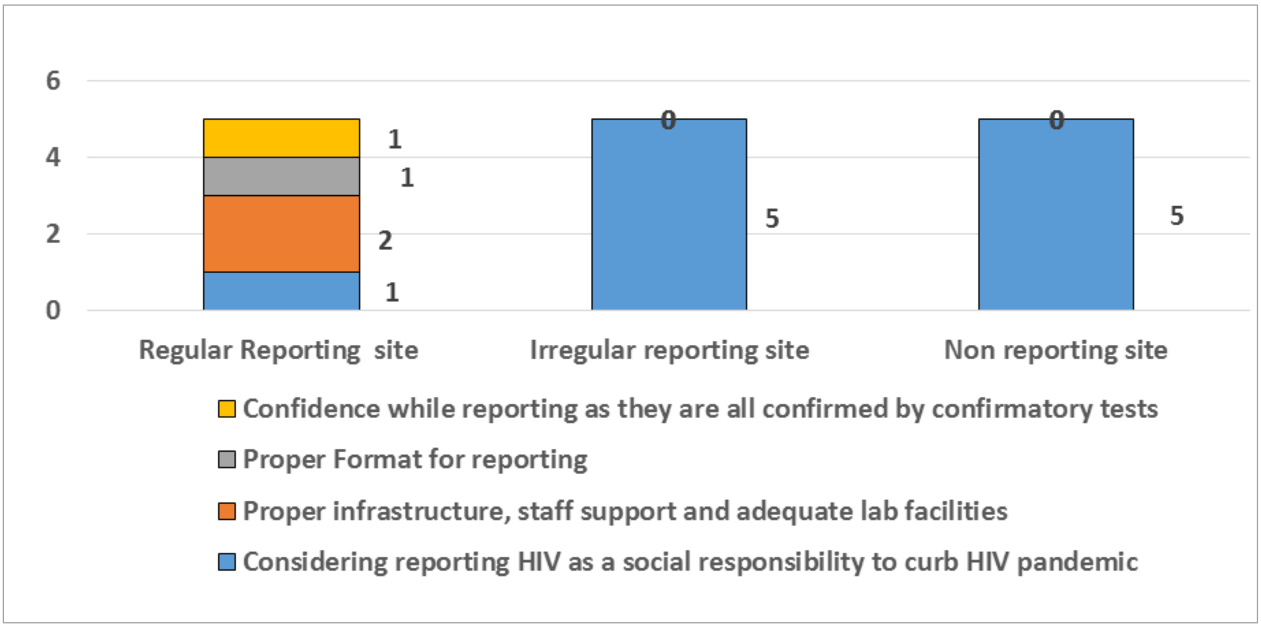
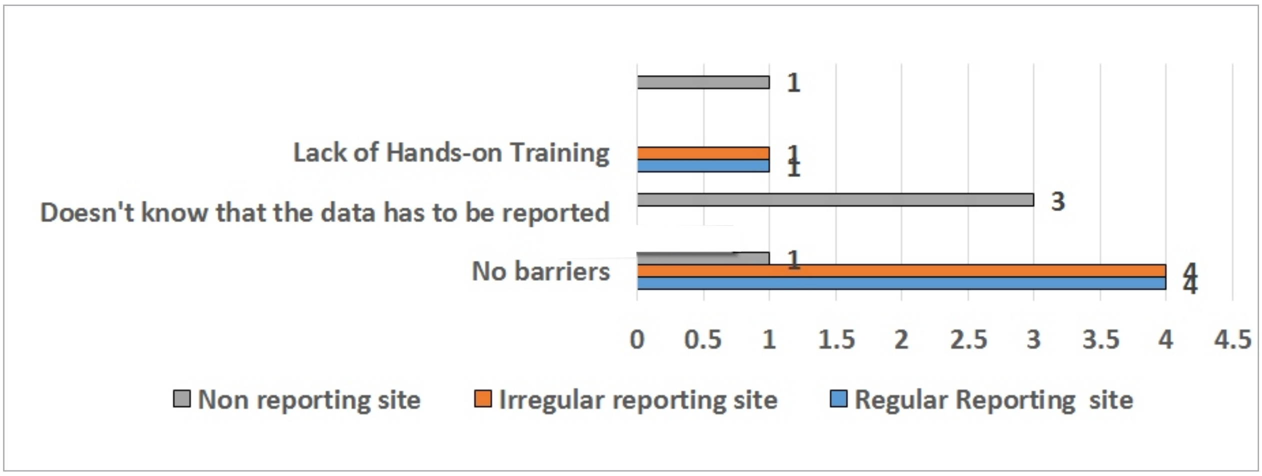


Figure 2: Distribution of barriers among regular reporting, irregular reporting, and non-reporting sites



CONCLUSIONS

It was noted in this study that in most of the centres, there were no separate data entry operators. Most of them had received training from their seniors. Many of the centres had separate computer systems with internet facilities for data entry. Only six centres had separate registers for HIV. A commonly observed motivator was social responsibility in eliminating HIV, followed by good facilities and support. Most of the participants had no barriers except a few, who said they needed hands-on training and better awareness regarding data entry.

RECOMMENDATIONS

- As a majority of the participants are motivated for HIV reporting, timely hands-on training and updating skills may help in increased identification and reporting of the cases and in turn will further strengthen the PPP model.
- If training is provided for effective counselling, it may help in increasing testing and reporting.

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Evaluation of the Quality of HIV Counselling Services and Experience of Clients Attending Integrated Counselling and Testing Service Centers of Chandigarh- A Mixed Method Study

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INTRODUCTION

95-95-95 is a UNAIDS devised target to help end the AIDS epidemic in the world. It aims that 90% of people with Human Immunodeficiency Virus (HIV) should know their HIV status. For this to be achieved, HIV testing must be scaled up. Counselling is a key component of HIV testing. Every client who visits a healthcare facility for HIV testing initially interacts with a counsellor. This interaction motivates the client to access HIV testing. Existing studies have shown that HIV counselling is optimal in some settings, while in others, it's suboptimal. A positive client interaction will have an impact on at-risk clients for getting tested for HIV.

OBJECTIVE

To assess the quality of counselling provided by counsellors of the Integrated Counselling and Testing Service Centers (ICTC) in Chandigarh

To evaluate clients' experience attending ICTCs

METHODS

The researchers adopted a cross-sectional study in which 615 clients were interviewed using a structured questionnaire, alongside 30 in-depth interviews. Trained medical social workers and intern doctors visited 12 standalone and 1 mobile ICTC in Chandigarh on designated dates to interview clients who came for counselling. Before meeting with the ICTC counsellor, the client's understanding of HIV was evaluated. After the HIV counseling session, they were given the same questionnaire again to measure the increase in their knowledge about HIV. To reduce bias, the interviews were held outside the counsellor room, and they were not informed about the visit. Questions were also asked to assess the quality of the counselling approach and counselling skills, which were then categorized based on a scoring mechanism. The items for the counselling approach included: counsellor introduced themselves, assessed risk, informed about HIV, HIV test, and revisit to the ICTC. The items in the counselling skills section included whether the client found the session useful, and encouraging, and had adequate time for questions. The quality of ICTC counselling was assessed by calculating a composite score for counselling process and counselling skill, individually. A higher score indicated higher quality of counselling. The 12-item counselling process questionnaire had responses rated 1 for yes and 0 for no while the 10-item counselling skill questionnaire had responses rated on a 5-point Likert Scale with options ranging from "strongly disagree (0)" to "strongly agree (5)". The 12-item counselling process was categorized as excellent (score 9-12), good (score 5-8) and average (1-4). The 10-item counselling skill was categorized as excellent (>Mean + 1 SD), good score (Mean ± 1 SD), and average score of (<Mean – 1 SD).

FINDINGS

A total of 615 study participants were interviewed. The mean age of study participants was 32.9

years (SD= +11.2). There were 285 (46.3%) males and 330 (53.7%) females. In nearly one-fifth of counsellor-client interactions (17.2%; 106/615), the counselling approach was excellent, while in 64.6% (397/615) of interactions the counselling approach was good, and in 18.2% of interactions (112/615) it was average. In the counselling approach nearly, all counsellors informed clients about the modes of transmission (603/615;98.04%), ways of preventing HIV (571/615;92.84%), and testing procedure (554/615; 90.1%); but in a few sessions client was counsellor introduced themselves (101/615;16.4%), informed about the voluntary nature of testing (99/615;16.1%), the implication of positive test result (66/615;10.7%), and when to return again (132/615;21%). Regarding counselling skill, in 9.8% (60/615) of counsellor-client interactions, it was excellent, while in 77.7% (478/615) and 12.5% (77/615) it was good and average, respectively. In most counsellor-client interactions, study participants found the session useful (543/615;88.3%). In 88.6% (545/615), 77.9% (479/615) and 81.3% (500/615) of interactions, the clients opined that the counsellor was respectful, and counsellors gave adequate time to ask questions and respond to their concerns and worries, respectively. Regarding satisfaction with ICTC services, most of them were satisfied (71.5%; 440/615). There were 15.9% (98/615) study participants who were very satisfied, while a minuscule were dissatisfied (2.1%; 13/615). Further, there was a gain in knowledge of clients attending the HIV counselling session regarding the transmission of HIV and its prevention. An excellent counselling process and an excellent counselling approach had higher mean satisfaction score as compared to counterparts. Multiple linear regression showed that counselling approach and counselling skills statistically predicted client satisfaction.

Nearly all participants believed that there were enough signages displayed in the hospital to guide them to reach the ICTC (601/615;97.7%), and almost all opined that there was cleanliness (550/615; 89.4%. However, 62.8% (386/615) opined that there is enough sitting arrangement.

The in-depth interview revealed that good experience was the way in which client-counsellor interaction happened. A polite counsellor who provided adequate time to the client while counselling, resulted in a good experience. Some of the verbatims of good experience are: "The method of explanation was good". "Mam talks very nicely. She explained everything well". "He was good, gave us lots of time." “Everything was good she spoke very politely". On the contrary, a counselling session in which no information was provided resulted in a bad experience. In addition, the small counselling room and improper queue management outside ICTC also resulted in bad experience. Some such verbatims are: “Everything was good they were doing the test quickly and writing my details in a register no one told me anything about HIV". “It is a little uncomfortable as the space is less and there isn't enough privacy to talk alone”. "People were breaking the long queue and it was a very long wait.”

CONCLUSIONS

A high proportion of counsellor-client interactions had a good quality approach and the counsellor exhibited good quality skills. Further, clients also had a high satisfaction level regarding the availed ICTC services. The counsellor-client interaction resulted in improving the clients' knowledge regarding HIV.

RECOMMENDATIONS

To improve the counselling approach of ICTC counsellors, there should be a focus on greeting the client, informing the voluntary nature of HIV testing, informing that the HIV test result is confidential, informing the meaning of possible test results and informing when to come to the centre again. Similarly, to further enhance the counselling skills, ICTC counsellors should give adequate time and encouragement to clients for asking questions and gaining greater client confidence in the maintenance of confidentiality. Moreover, improving sitting arrangements for clients, proper queue management, and spacious counselling rooms will improve the clients' experience.

ACKNOWLEDGEMENTS

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Study on Linkage Loss from Screening to Confirmatory Test in case of HIV Testing

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INTRODUCTION

In developed countries, people living with HIV who are on antiretroviral therapy (ART) can expect a lifespan comparable to the general population, but millions lose lives without ART. [1,2] With 2.4 million HIV infected people, India bears the second largest burden of HIV in the world. While it is estimated that two-thirds of HIV-infected patients are eligible for ART at the moment of HIV diagnosis, only 604,987 (35.6%) of the 1.7 million people living with HIV who were registered in Government ART centres had started ART by December 2012. [3,4] Linkage loss from screening to confirmatory test in case of HIV testing is an important issue in National AIDS Control Programme (NACP) more so in the entire country. [5,6,7] The state of Jharkhand is also not an exception, but the actual data is lacking for the state of Jharkhand. The study was intended to determine the reasons of linkage loss in HIV testing in hard-to-reach areas of a tribal predominant state and to provide remedial measures for these barriers for effective implementation of NACP in the state.

METHODS

The present study was conducted in three blocks of Hazaribagh district namely, Barhi, Bishnugarh and Chauparan. These blocks were chosen randomly by lottery method. It was a descriptive study which included qualitative techniques of data collection like in-depth personal interviews and focus group discussions to describe the factors responsible for linkage loss from screening test to confirmatory HIV test. ANMs and Sahiyas (ASHA workers) of selected blocks were study participants for the focus group discussion. Lab technicians and counsellors of ICTC, people eligible for ART and who were detected HIV-positive by screening but did not turnup for confirmatory test were selected for in-depth interview. A total of 69 Sahiyas (ASHAs), 37 ANMs, 07 subjects suspected of linkage loss, 05 Laboratory technicians (LT) and ICTC counsellors were included in study. Field staffs were recruited, and training was given to them to conduct in-depth interviews and FGDs. Faculty from the Department of Community Medicine and Microbiology supervised every team. The descriptive analysis was completed for obtaining vital information for linkage loss. Detailed audio recordings were converted into comprehensive, meaningful transcripts in MS Word format. Table and figures were made using MS Excel. Institutional Ethics Committee of Sheikh Bhikhari Medical College, Hazaribagh reviewed and approved the proposal for ethical consideration and approval was taken prior to the study. Written and informed consent in Hindi was taken from all the respondents before data collection. The respondents were informed in detail about the purpose of research, confidentiality, and voluntariness of participation with their full right to exit.

FINDINGS

Data were collected about the total population tested at ICTC centres of all three selected blocks namely Chauparan, Barhi and Bishnugarh. Overall, HIV reactive cases were on declining trend in Barhi and Chauparan blocks whereas it was nearly constant in Bishnugarh block for last four years except a slight decrease during 2021-2022. All Sahiyas, ANMs, LT and counselors were aware about term HIV/AIDS and many of them knew about its mode of transmission. Some of them knew that it is a viral illness. About 80% of Sahiyas correctly knew about mode of transmission of HIV, including unprotected sex with infected person, transfusion of infected blood, sharing of infected needle and from infected mother to new-born child. However, some Sahiyas' think that other mode of transmission exists. All the Sahiyas said sexual route is most common reason for spread of infection in their areas. Sahiyas and counselors were correlating HIV infection and migration of people for jobs to other states and other cities. They shared that about 70% to 80% cases are migrant workers and truck drivers. Almost all Sahiyas and ANMs said that there is no linkage loss in their respective area. Rather, there were some other issues related with HIV testing and treatment like non-testing, and delays in testing and initiation of treatment. Social stigma and ignorance were most common perceived reason for people not coming up for testing. The reason for delay in confirmatory testing as found in FGD was people thought of social discrimination.

As one of ANM told: 'log chhupana chahte hai, agar dusre log jaan jayenge to kharab drishti se dekhenge.'

Another ANM said: 'unhe samaj se dar lagta hai ki kahi log duri na bana le'.

Reasons for not going for confirmatory testing were social stigma, distance of testing centre from home, and non-cooperation of family members. A few people were not taking medicine despite awareness about their confirmed positive case. Lack of awareness and drug unavailability in nearby CHC is an important issue for poor drug compliance.

CONCLUSIONS

Proportion of reactive cases of HIV is on declining trend in Barhi and Chauparan blocks whereas it remains nearly same in Bishnugarh block. Almost all Sahiyas and ANMs were aware about HIV and its modes of transmission. Illicit unprotected sexual relations were most common reason for HIV transmission in study area and most common in long distance truckers and migrant populations. Delays in initiation of treatment and non-testing of suspected subjects were the main issue rather than linkage loss. Non-availability of drugs at block level, social stigma, low socio-economic status, and poor awareness are some of the main reasons for linkage loss or delay in initiation of treatment.

RECOMMENDATIONS

Since many ANMs were not sure whether they are allowed to use screening kits to test people other than non-pregnant female, a clear guideline regarding use of screening kits for populations other than pregnant females is required so that ANMs can do testing of selected high-risk groups at their health centres with the help of Sahiya (ASHA). This will enhance the testing of HIV, especially in hard-to-reach areas.

As HIV reporting from private laboratories is not robust, mechanisms need to be implemented to improve reporting of screening test results by the private laboratories.

From areas reporting higher number of cases, eligibility criteria for screening test of HIV can be widened in health facilities especially for those belong to high-risk populations and migrant workers. This will increase the number of people who can get tested for HIV.

To improve treatment initiation and compliance, a functional link ART centre would be helpful especially in remote and hard-to-reach areas and in areas with higher case reporting of HIV.

ACKNOWLEDGEMENTS

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Scaling up Partner Testing of Index PLHIV in Bathinda District: A Pragmatic Trial

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INTRODUCTION

India had 23.19 lakhs PLHIV in 2020 and aims for zero infection, zero death, zero stigma and discrimination.[1] This requires the need to identify and target high-risk groups, such as sero-discordant couples or partners, for HIV prevention interventions. Two key strategies are partner testing and starting ART for the index case. In the year 2021, partner testing was low (46% nationally, 32% in Punjab) due to various barriers against the desirable rate of >90%.[1] Therefore, this study was planned with a proposed intervention to increase uptake of the counseling and testing services among PLHIV individuals seeking services from ICTC and Anti-Retroviral Therapy Center, Bathinda.

METHODS

This study is a pragmatic intervention trial conducted in ICTC and ART centres at District Hospital, Bathinda from March to August 2023 among 100 newly detected HIV positive adults. The intervention introduced among the participant groups were invitation to partner and tracing through phone/SMS Reminder/Community tracing. The participants in the intervention group were asked to fill out an interview schedule consisting of the following parts:

Sociodemographic questionnaire

Multidimensional scale for perceived social support scale (MDSPSS)[2]

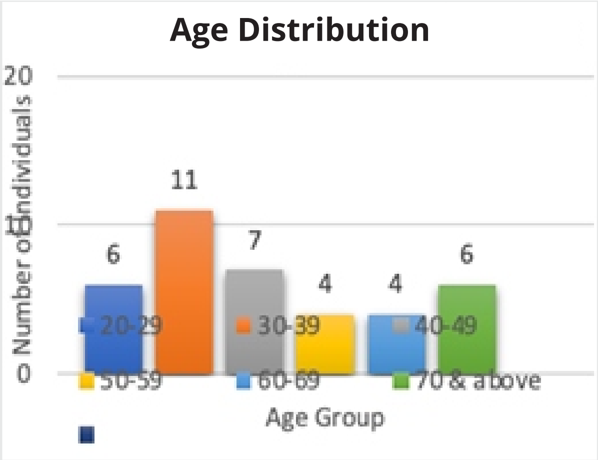
HIV Treatment adherence self-efficacy Scale (HIV-ASES)[3]

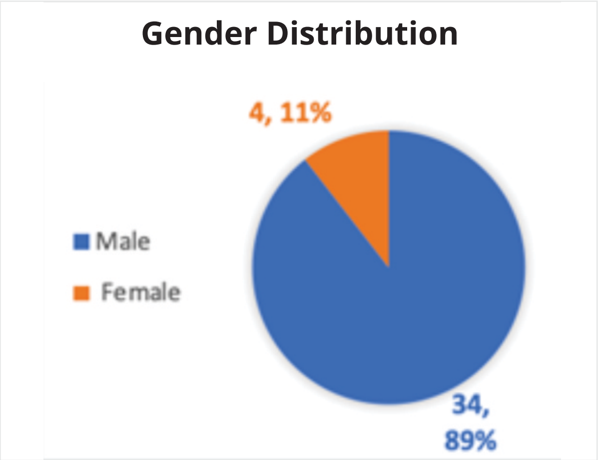
FINDINGS

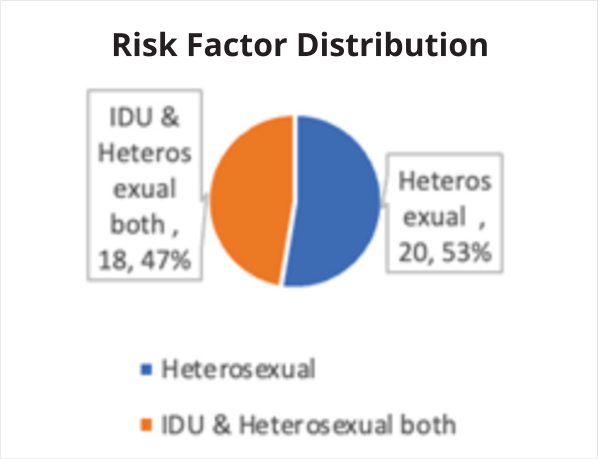
Out of the 38 partners who were counselled, the following outcomes were observed:

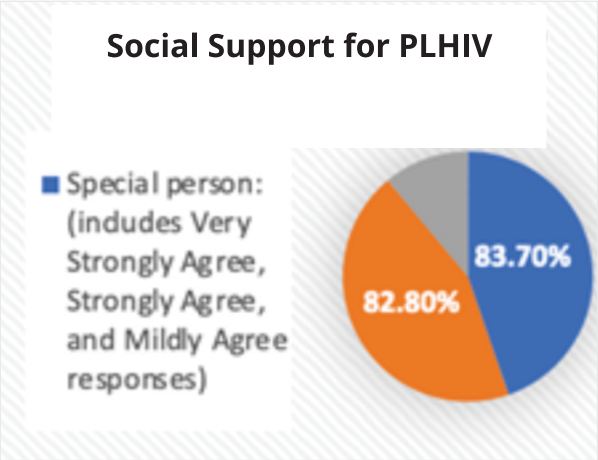
Till April 28, 2023, 38 study participants have been enrolled. Majority of the participants were males (34), and mostly (11) in the 30–39-year-old age group. Nearly one fifth (21%) of the partners tested positive. Majority of partners who were counselled (26 out of 38) came for HIV testing after the first call. This indicates a positive response to the initial outreach effort. The second and third rounds of calls yielded fewer participants, with four and two partners, respectively. The major reasons for the delay in testing were stigma and fear regarding HIV/AIDS, low awareness about the health system and being out of station during the period. An encouraging finding is that six partners voluntarily decided to get tested.

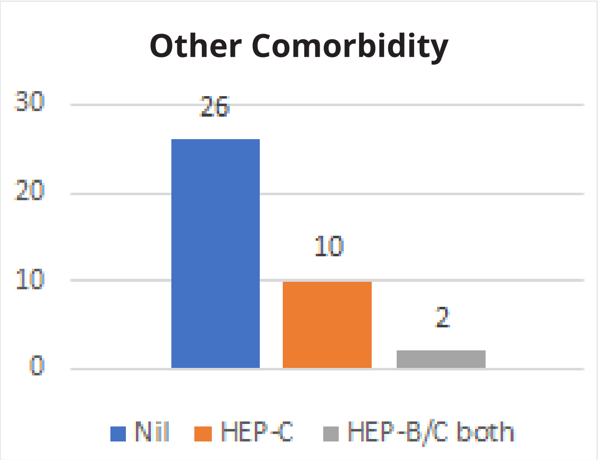
On the MDSPSS scale, the majority 22 (57.2%) reported receiving high support, whereas 13 (35.7%) and 3 (7.1%) reported receiving medium and low social support respectively. On the HIV Treatment Adherence Self-Efficacy Scale (HIV-ASES) the participants reported a median score of ⩾7.9 (range 1-10) on each of the 12 item questions, indicating better adherence to the treatment regimen.











CONCLUSIONS

The partner testing program achieved positive outcomes in terms of encouraging HIV testing among partners of PLHIV patients. However, it needs to focus more on the vulnerable subgroups of PLHIV, where partner testing is low.4,5 The social support scale reports the varying levels of support perceived by PLHIV patients, highlighting the importance of special individuals, families, and friends. Addressing the immediate supportive testing of partners of PLHIV, counselling and supportive continuum of care, can enhance the overall quality of life for PLHIV patients and enhance partner uptake into the health system.

RECOMMENDATIONS

- Fast-track provision of services to couples on a priority basis, like preferential testing and treatment, when they come to test for HIV together at the health facilities, may improve partner testing.

- Improved tracking mechanism through the help of peer educators of the community and local frontline healthcare workers (ASHA, ANM) for the subgroups whose partners show low levels of testing needs to be formally introduced, particularly for vulnerable subgroups of PLHIV, such as partners of migrants, people with low levels of education, those with fear of stigma and MSM.

- Awareness campaigns in the NACO program should enhance coverage, particularly in the rural population, so that stigma regarding testing and safe sex practices among high-risk groups can be effectively managed.

ACKNOWLEDGEMENTS

We thank PSACS officials for their support. We would also like to extend our gratitude to the PLHIV attending the ICTC and ART center for agreeing and being a part of the study.

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Experiences about the Situation of PPTCT in Kohima, Nagaland

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INTRODUCTION

The 2020 National AIDS Control Organization (NACO) Sankalak report highlighted that the number of children with HIV in India is over 81,000, accounting for 3.5% of India's total population. Nagaland reported the second-highest adult (15–49 years) HIV prevalence in the country and 91% of the new HIV cases in Nagaland occur through the sexual route. Prevention of parent-to-child transmission among pregnant women who are HIV-infected during pregnancy and lifelong antiretroviral therapy (ART) could contribute to the reduction of new HIV infection among new-born. HIV transmission from parents to children is a preventable condition that requires perinatal management, including early diagnosis and treatment during pregnancy. In recent years, India has significantly increased the measures to prevent parent-to-child transmission and improve antiretroviral therapy facilities for HIV-infected mothers and children, but there is still a rise in cases of HIV among new-born.

OBJECTIVE

This study was conducted to understand the situation at different levels following the Nath (2020) system – Individual level, Societal level and Programme level to identify key factors for more effective implementation of PPTCT.

METHODS

Seven medical professionals and six counsellors from all the centres in Kohima district were interviewed using open-ended qualitative tool to better understand their experiences about the situation of PPTCT in Nagaland at the programme level. The respondents also included three PPTCT client and two NGO workers working with People Living With HIV(PLHIV). Additionally, a review of the literature was done with references to PPTCT in recent high-level publications, case studies, and NACO reports. The primary data was collected using questionnaires, voice recordings, interview transcriptions, and data analysis instruments were employed. Following required quality control methods, all safety precautions and confidentiality were maintained. Due to a lack of secondary data and a limited number of respondents, the quantitative analysis suggested could not be significant. However, the findings establishes barriers to access PPTCT services.

FINDINGS
AT INDIVIDUAL LEVEL

In ideal situations, clients had no medical conditions, and the ART medications were successfully reducing their viral load. Additionally, their families were providing them with emotional and financial support on a personal level. In Kohima, the PPTCT initiative has been quite successful and well-applied. The project has helped the clients, who are happy with it overall.

INSTITUTIONAL LEVEL

The clients suggested that if the government provided a guesthouse or homestay for people who travel vast distances to get their blood tested or come in for a check-up, it would be extremely useful. The initiative faces certain difficulties since financing comes mostly from NACO and WHO, and the stock of testing kits occasionally runs out. In addition, there are sometimes delays in the supply of nevirapine syrup. The status and medical histories of the customers are unknown to the SMOs and MOs at the ICTC facilities in the Kohima District. It was discovered that doctors can only begin testing and start ART drugs if necessary in situations of delayed newborn diagnosis. At certain instances, follow-up is hampered when outreach workers and counsellors are unable to contact clients due to a lack of privacy and confidentiality at the ART clinic.

SOCIETAL LEVEL

The course further aids the PLHIV communities by getting them involved in taking action alongside outreach workers, helping other clients who are hesitant to come forward by supporting awareness, treatment programmes, and acceptance. There are still issues with discrimination in the PLHIV community. Problems exist on a social level; clients continue to endure stigma, labelling, and prejudice from their neighbours or families. Some clients are apprehensive about going to counselling services or centres out of concern about stigma or discrimination.

CONCLUSIONS

Individual

The PPTCT programme, ART, and EID in Nagaland have been successful in reducing transmission from mother to child. In Kohima District. Positive clients are assisted by outreach workers who deliver medications to their homes.

INSTITUTIONAL/PROGRAMME

All three centres – ICTC, PPTCT, andART–are well utilized and the doctors from all three centres have different roles.However, the programme is highly dependent on NACO and WHO for funding and testing kits are sometimes out of stock. In some cases, follow-up is impeded when the counsellors and outreach workers cannot reach the clients.

Societal

Discrimination is still a problem among the PLHIV communities.

Some clients feel reluctant to visit the centres or counsellors due to fear of stigma or discrimination.

RECOMMENDATIONS

- All ICTCs in the Kohima district should have access to ART drugs,

- ICTC medical staff needs to be informed of all relevant data and records and aware of the clients' status.

- For greater privacy, the ART doctor should have access to a separate room. Nagaland government should support the programme financially and administratively, and the counsellors need more training programmes

ACKNOWLEDGEMENTS

This study was conceptualized and technically supported by the Nagaland State AIDS Control Society (NSACS). Funding for the study was provided by the National AIDS and STD Control Programme (NACP). We are thankful to NACO and SACS for extending all the support and guidance to the research study. And lastly, all the participants of the study from NHAK ICTC, ART and PPTCT centers', district ICTC's centers, and clients who willing participated without any reservation and provided essential information and data to make this project possible.

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Care, Support and Treatment

Knowledge, Attitude and Practices towards ART Treatment among Newly HIV Positive HRG individuals in Goa

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INTRODUCTION

The advent of anti-retroviral therapy (ART) is a major respite for people living with HIV. Non-adherence to ART can adversely affect clinical, immunological and virological outcomes of HIV infected patients (Ankrah, et al., 2016) and cause drug resistance (AmanKawah, 2015) which might further alter the treatment response and increase the chances of spreading the disease, especially with regard to mother to child transmission, often resulting in economic burden (AmanKawah, 2015).

Newly diagnosed HIV patients might be more at risk for non-adherence to the treatment and care modalities and thereby they face life-threatening events and become sources of transmission (Ahmed, et al., 2019; AmanKawah, 2015). This study aims to assess the level of knowledge, attitude, and practice behaviours related to ART among newly diagnosed HIV- infected individuals, which can inform strategies in facilitating and enhancing the adherence among PLHIV in the state of Goa.

METHODS

A qualitative approach and a survey design were used in the present study. The list of fifty-two (52) newly diagnosed HIV HRG individuals attending the selected ART center in Goa was obtained from the selected ART center. The researchers conveniently identified the sample whenever they attended the outpatient and follow-up counseling session. Data regarding their knowledge about ART, their attitude towards ART and their practice of ART was collected from thirty-two (32) participants using an open-ended questionnaire after obtaining their informed consent. The data collection period was from November 2022 to February 2023. Demographic data was also obtained as part of the questionnaire.

FINDINGS

1: Knowledge

Concept of ART

Twenty-two participants (69%) stated that ART treatment means "to control the virus in the body", or "to treat the HIV Infection"; ten (31%) were unaware of the meaning of ART and 21 (66%) of the participants did not know the names of ART drugs, 30 (94%) verbalized that the person infected with HIV infection has to consume the ART treatment to remain healthy. One said that the treatment should be taken "as long as person is alive, till the health is normal, to keep the viral count below detectable level, till the doctor says to stop."

Apart from the counseling and information provided at the treatment center, three (9%) participants sought add-on information from doctors, and eight (25%) participants through internet.

Effect of ART

Ten (31%) verbalized the purpose/effect of ART as "to control the infection in the blood and stop the transmission to others", five (16%) verbalized that the purpose is to "live a normal life, maintain or reduce the viral load so that immune system remains strong". One participant said, "it will help suppress HIV virus which is there in the body and not let it multiply". One of the participants verbalized that "ART can cure HIV Infection completely because before starting treatment I was completely ill, felt that I would die, thought that I would have to leave my daughter in the hands of strangers and leave the world, but after starting ART within one day I felt better and free from illness symptoms, ART can cure the HIV completely". Seven (22%) said that they do not know whether ART would treat HIV infection completely and five (16%) were not aware of the effect of ART.

Immunity Status

Eleven (34%) participants stated that CD4 count indicates "how much is the strength in the body or the level of blood in the body to fight the infection". One said that "CD 4 Counts indicates the amount of Virus in the body". Seven (22%) of them said that "CD 4 count need to be monitored every three to six monthly or every six monthly to monitor the growth or effect of the virus". The meaning of viral load not detected was stated as "the virus is not detected and the infection is not transferable" by six (19%) participants. In case of a person stopping or taking the ART irregularly, one of the participants verbalized that; "the illness will flare up, person will have more symptoms or problems, and the person can die, virus can mutate, and the drug will not work on the virus, have to change the medicine".

Alternative Remedies

Four (13%) participants did not know if there is any other remedy to cure HIV infection, eighteen (56%) said that there is none, whereas two participants said, "there is can be other remedy for HIV infection".

2: Attitude

Facilitators

All 32 (100%) were motivated to take ART because they felt good after starting ART; 17 (53%) said "I want to live, live a healthy normal life". One verbalized that "if not taken regularly, the disease can flare up and person can have problems related to symptoms of HIV, even people said that I would die, but after starting ART I felt that am completely healthy" , another verbalized, "because I have to survive to take care of my daughter, there is no one else to do so, she is studying in school, another; "ART is necessary, in order to get better because symptoms like body ache subsided after starting ART". Six (19%) said that they feel good and that taking ART helps to be healthy and not have any health issues. Eighteen (56%) responded as having no problems with ART.

Barriers

Three (9%) participants verbalized feelings such as: "sometimes I feel sad and sometimes I feel it is a part of life". One felt sad as he had to continue the treatment lifelong. Another stated; "It becomes stressful, I have to take it on time and due to work I have to hurry", eleven (34%) participants expressed that they experienced anxiety related to the regular consumption of ART. One stated "it becomes stressful as the drug has to be consumed on fixed time"; whereas majority did not have any problems.

Fear of Transmission

One participant voiced; "am not having contact with anyone hence not concerned. If there contact with blood of infected person with others I should be worried" another; "one has to be protective in all sense". Another verbalized; "initially I was very concerned about the transmission to my close family, but after the counseling at the ART centre I have come to know the mode of transmission". Another stated; "I am scared with the use of personal objects, such as water bottle in the house, my family might get the infection", five (16%) verbalized concern over the transmission to close relatives and family through blood and other personal belongings despite their therapy. Twelve (38%) said that they were not concerned about the transmission of HIV to their family and friends. Eighteen (56%) expressed that a HIV infected person on ART can get married. One stated; "the infected person needs to take precautions such as; Take medicine on time, inform the partner, and use protection of condom and testing" whereas some were not aware of the precautions. Six (19%) were unaware of neither the mode of transmission nor the precautions. One stated;" when you have sex, to prevent transmission to the partner one should take precaution such as prophylaxis treatment". Six (19%) were unaware whether a person on ART should get married or not. One among them said; "No, because, normally people do not take medications and in this case the other person will get to know that the partner in on some medications hence might be suspicious". Another voiced; "no, because the disease will be transmitted to the other person and will spoil the other person's life also".

Disclosure

Eight (25%) have not disclosed the HIV nor the treatment status to anyone. Some family and friends were aware about the HIV status of the participants. One among them reported; "My parents, family members are aware of the ART treatment. They are very confident not to discuss about it, because it will trigger negative symptoms in me, and they want me to be normal".

3: Practice

Identification & Storage of ART Drug

Eight (25%) knew the name and eight (25%) identified the container of the drug. Sixteen (50%) were neither able to name nor identify the ART drug consumed. Thirty (94%) stored the drug in the container and in some convenient area in the house such as drawer, locker, cupboard and bag. During travel away from home, seven (22%) reported that they carry the drug along. One said: "I take in the bag along with me wherever I go"; another; "I carry the drug in a separate/Ziplock container without a name".

Side Effects

Twelve (38%) verbalized experiencing side effects during the start of ART such as perspiration, nausea, acidity, insomnia, migraine, itching, anxiety, depression, mood swings, weight gain, rash, gastric problem and diarrhoea. One said, "In future I can get lung problems, and diabetes". Another reported; "I was having pricking pain at the side due to the medicines ART, initially had bloating of stomach, I feel that something is acting on my body, not really but my personal experience the medications take time to act, one two weeks, I had a lot of perspiration, for initial two weeks, but can cause nausea, acidity". One said: "initially during adjustment phase, there was lot of itching for about two weeks" anxiety ad sleeplessness and liver problems, lack of proper sleep bad dreams, anxiety, and weakness.

Adherence of ART

Twenty-nine (91%) reported complete adherence. They consumed the drug after dinner but did not maintain any specific record of the treatment themselves. Three (9%) reported of having missed the dose once or twice in a month. One stated: "I am punctual in taking my drug, but have missed one or twice, during work and travel," They have consumed the drug immediately after remembering the intake of the drug and thereafter rescheduled at previous time. One stated: "I missed the drug once and then changed the time and continue thereafter at the rescheduled time"; another;" skip that day's dose and take the next dose on the next day at the scheduled time." Eighteen (56%) kept mobile alarm as reminder for the drug. One verbalized; "my mother brings the tablet to the dining place and keeps ready "; another wife reminds. None had misplaced nor thrown away the ART drug. Two (6%) had exchanged the drug with their partner.

Support of Family and Friends

one participant verbalized; "my daughter knows that am sick, but she does not know what disease, my daughter reminds me over the phone in taking the drug, she wants to accompany me to the hospital but I ask her not to", another, "my family is aware of my condition, they do not care about me, and in my native village the family and relatives, neighbours have told not to return to the village". Twenty-eight (88%) have informed their spouse, parents and or friend, partner and have adequate support for adhering to ART although all support persons were not aware of the HIV status of the participant. Four (13%) had no support from their close family nor friends and 10 (31%) had not disclosed their HIV status to anyone.

Lifestyle Modification

Nine (28%) participants maintained sexual contact with their partners while on ART treatment but were using condoms as a protective measure, 26, (81%) had modified their lifestyle in terms of reduction in the intake of fatty and spicy foods, engagement in gymnastic exercises, meditation and yoga, increased intake of water, fruits, protein and one of them reported of quitting alcohol. One expressed; "I have made changes in daily routing, diet, going to Gymnasium, but not really because of ART,"; another reported; "I have increased water intake, eat healthy food and vegetarian diet, do exercise, yoga, play badminton and have started going to gymnasium". Another; "I have quitted alcohol, smoking and do workouts instead". Three (9%) were consuming vitamins and other prophylaxis, 11 (34%) continued to consume alcohol, 2 (6%) smoke cigarette and 2 (6%) indulge in injectable drugs occasionally or at least once while on ART. None had consumed nor tried any neither alternative therapy nor medicines as treatment for the HIV infection.

CONCLUSIONS

The findings showed that the participants were aware of the effect of ART and the need for maintaining the immune status. Almost all the participants were convinced and motivated to adhere to ART. They were concerned about the transmission of infection to others and verbalized the need for using protective measure during sexual activity. Some of the participants had not disclosed their HIV status due to the fear of stigmatization and social isolation. Most of the participants knew the drug they were consuming, some of them experienced aside effects during the initial period of treatment. All of them were followed strict adherence. Many of them had adequate support from family and friends and have modified their lifestyle for better effect of the treatment.

RECOMMENDATIONS

Further research needed on KAP among PLHIV, effectiveness of ART and quality of life among PLHIV on ART.

ACKNOWLEDGEMENTS

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Assessing Lost to Follow-Up Rates and Associated Factors Among People Living with HIV/AIDS on Antiretroviral Therapy from 2017 to 2021

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INTRODUCTION

Literature from Sub-Saharan Africa and its recent systematic review of cohort studies showed that every third ART patient was classified as lost to follow-up within 3 years of starting ART. The proportion of patients who stopped taking ART cannot be easily determined from clinic data by following the participants. This study was carried out to estimate the rate for loss to follow-up (LFU) by carrying out record-based analysis of patients living with HIV/AIDS (PLHIVs) who received anti-retroviral therapy (ART) from the ARTC of Dr. RPGMC, Kangra at Tanda, Himachal Pradesh for the period between 2017-2021, and to explore factors associated with record-based LFU PLHIVs to ART received care at ARTC of Dr. RPGMC, during the same time period.

METHODS

A mixed-method study was carried out to meet the requirements for the completion of the study. A case-control study where selected PLHIVs registered with ARTC of a tertiary care hospital between 2017-2021 were assessed with logistic regression for baseline characteristics, and possible reasons for treatment interruption among 120 cases (regular) and 70 controls (LFU). Focus group discussions (FGDs) were conducted with health professionals and PLHIVs to identify perceived reasons for LFU.

FINDINGS

A total of 244 PLHIV were interviewed, of which 170 (49.2%) continued the treatment, 54 (22.1%) missed the dose, and 70 (28.7%) were LFU. LFU fraction was high during 2017-18 (27.2 and 22.1%) and 2020 (20.8%), and relatively low in 2019 (10.7%) and 2021 (11.2%). The most common reason for LFU was death followed by transferred out. Comparative analysis between cases and control for baseline characteristics were similar for age, marital status, literacy, and employment. However, mean self-reported annual income was observed to be significantly high in LFU participants. Disease profile observed that in both groups' participants had disclosed the disease status to their spouse/family member but not to the community. Mean duration of treatment was statistically high in LFU group (3.2 vs. 3.7). Mean duration of time (in minutes) was reported to be statistically high in participants who were LFU (143.3 vs. 211.9). History of substance abuse (opium/heroin etc.) was also reported to be statistically high in the LFU group

(29.2 vs. 47.1%), along with alcohol use (33.3 vs. 51.4%). Mean patient satisfaction score (PSQ) was also statistically similar between two groups. Adjusted measure of association using logistic regression was carried out and duration of treatment interruption (in days) showed positive and significant association with LFU (OR: 1.1; 95%CI: 1.0-1.2), after adjusting for age, baseline CD4 value, time taken to visit health facility, history of substance and alcohol use, and adverse effects/lockdown. FGDs, among health professionals observed that PLHIV with low CD4 count (<350) were likely to discontinue the treatment as they considered themselves healthy. Moreover, the COVID-19 pandemic disrupted treatment because of hardships faced during travel, and side effects of ART medication such as fevers being reported by PLHIVs to health professionals. Among PLHIV, common reasons for LFU were lack of space for counselling and waiting area at ARTC causing fear for the lack of privacy, medicines being delivered monthly wherein it can be provided for longer durations considering individual specific situations and travelling to ARTC which incurs indirect costs and time to collect medicines.

FGDs of health professionals suggested that PLHIV with low CD4 count ("Jinka CD4 count kam hota hai woh jaldi treatment chodd dete hain") and COVID-19 pandemic ("COVID mein logon ko medicines lene mein kafi dikkat hui") likely reasons for lost to follow-up. Whereas, dispensing of ART for limited period ("dawai agar ek mahine se zyada ki mil jaye to humein bar nahi aane padega") and long travel duration ("Dawai ke liye aane padata hain, dur se anae se paise bhi lagate hain or time bhi zaya hota hai") were reported among PLHIV during FGDs.

CONCLUSIONS

Quantitative assessment showed that ART absenteeism during treatment was associated with LFU. Factors like age, CD4 count, body weight, and economic status were not related. FGDs showed that reasons for treatment interruption were poor health (advance disease state) at the time of treatment, COVID-19 pandemic, and travel to collect ART medicines.

RECOMMENDATIONS

It is recommended that individuals living at far off areas from the ARTC need to be prioritized for accelerated ART or can be dispensed for a longer duration. Village-level ART monitoring, by Accredited Social Health Activist (ASHA), is likely to reduce probability of treatment interruption.

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A Comparative Study on ART Adherence Among the Tribal and Non-Tribal Populations Living with HIV/AIDS in Capital of Jharkhand

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INTRODUCTION

AIDS is one of the most serious public health challenges in world. There were about 38.4 million people across the globe with HIV in 2021 of which 1.5 million newly acquired the infection in the same year [1]. According to UNAIDS globally, 28.7 million people living with HIV were receiving ART, so its coverage was 75% [66–85%] in 2021 [2]. India has small percentage (0.29%) of the population living with AIDS but has large number of patients which amounts to approximately 2.3 milion [3].

ART is recommended for all PLHIV, regardless of CD4 cell count, to consistently suppress viral load, maintain high CD4 cell counts, prevent AIDS and prolong survival [6,7]. Patients' adherence to ART is a primary determinant of the effectiveness of treatment and predicts the clinical course and development of AIDS [4,5]. Failure to adhere to ART can cause dangerous outcomes such as substance abuse, depression, and spread of infection while the success of ART depends on the extent to which a patient takes his or her treatment according to the prescribed doses, dosing intervals, and other medication instructions. [8,9] For ART to have maximum effect, greater than 95% adherence has been suggested [5,10]. This study is intended to compare the relative importance of patient and treatment characteristics on non-adherence behaviour. So, we had performed a comparative study to provide conclusive data on ART adherence across tribal and non-tribal population in Jharkhand and the reasons for non-adherence.

METHODS

A Cross-sectional Analytical Study was conducted in the ART centre Ranchi as it had the maximum number of patients from across the state registered for ART. From this centre 30 Tribal and 30 Non-tribal adults were selected randomly who had taken minimum 6 months of treatment after taking proper written informed consent. Data of all the patients fulfilling the above criteria was analysed for finding out the adherence to treatment. Adherence was measured by self-reported medication adherence and pharmacy refill data.

We wanted to investigate the causes of non-adherence in details. For this, 30 tribal and 30 non-tribal patients who were non-adherent to the treatment were selected randomly by random number table. But during field visit interviews we observed that some reported non-adherent patients were taking regular medication from other sources. So, some adherent patients which were reported non-adherent were

were also included in the study. Each person was interviewed using a semi-structured, open-ended questionnaire and comparison between the two groups was done. Thus, a total of 60 patients were interviewed. A counsellor in the selected centre was also interviewed in depth.

Data was entered in MS Excel and a template was generated. Mean and Standard deviation were calculated for continuous data. Proportion was used for Nominal and Ordinal data. Appropriate Statistical tests were applied depending on Qualitative and Quantitative data. P-value of less than 0.05 was considered as statistically significant. Study was conducted after the approval of IEC, RIMS, Ranchi, Jharkhand.

FINDINGS

The level of ART adherence among the selected sample of PLHIV patients is around 78%. The mean values among the patients who are adherent and non-adherent to ART did not show any significant difference between the mean age, weight, blood urea level, SGOT, Haemoglobin and CD4 count. Mean S. Creatinine level was found to be less among tribal and non-tribal non-adherent patients, and this was statistically significant with a p-value of 0.001. Majority of patients residing in rural areas were non-adherent to the ART, but it was not found to be statistically significant. Majority 42.9 % non-adherent to the ART belongs to General Category but it was not found to be statistically significant. Among adherent to the ART, the majority 81% were educated up to primary level, 50% were educated up to higher secondary followed by 66.7% who were educated up to secondary level, but which were not found to be statistically significant. Most of non-adherent patients were farmers, married, belonged to BG Prasad Class 5 socioeconomic class and lived in nuclear family. But this association was not statistically significant. A significant proportion of non-adherent patients (66%) had past or present addiction which was statistically significant with respect to drug abuse but not with alcohol consumption.

Main reasons for being non-adherent to ART were distance from centre, money problems for travelling expense, involvement in personal work and lack of awareness. Majority 5 (37.5%) of Tribal were not taking ART due to distance problem and this factor was not found to be statistically significant. Ethnicity, religion, and place of residence again had no effect on adherence level of ART.

Most of the participants were not taking medication due to travel expenses and loss of wages on the day of travelling to ART centre for receiving drugs. Other respondents were not taking medication because their symptoms improved and they thought they did not have the disease anymore, due to side effects of the ART drugs like dizziness and weakness or due to long waiting time in receiving the drugs from ART centre, leading to loss of whole day of work and wages.

CONCLUSIONS

The study findings showed a gap in ART adherence among PLHIVs. About 22% of patients reported to be non-adherent to the treatment. Findings also showed that the age, weight, blood urea level, SGOT, Haemoglobin and CD4 count don't have significant difference among adhering and non-adhering to ART among study participants. The distance from centre, money problems for travelling expense, involvement in personal work and lack of awareness were the major reasons for being non-adherent to ART.

RECOMMENDATIONS

There should be regular inflow of drugs at ART centre and provision to give drugs for longer duration (3 months) for patients coming from distant and out of reach areas.

Some sort of reminders like phone calls or messages for patients to remember their next due dates can be initiated

Counselling to the patients can be improved to increase awareness about the disease and provide social support, so that people understand the importance of regular treatment.

Establish more ART and Linked ART centres to decrease the travelling distance and cost incurred in travelling.

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Effectiveness of Care, Support and Treatment Services in Antiretroviral Therapy (ART) Center, Jharkhand

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INTRODUCTION

Recent HIV estimates corroborate the fact that HIV epidemic in India continues to decline at the national level [1]. There is an estimated 46.3% decline in annual new infections at national level from 2010-2021 [1]. As the country is in the last mile towards the AIDS 'End-Game', the assessment of effectiveness of services provided at ART centers would enable us to focus on the gaps and take necessary measures to provide high quality ART services in a stigma-free environment. The present study was designed to assess quality and effectiveness of care provided under the Care Support and Treatment component in terms of (i) the client satisfaction towards the services provided, (ii) the completeness of information captured in the ART treatment records, (iii) to identify systemic problems/issues faced by the ART staff and PLHIVs in order to try and address them and (iv) to identify best practices that can be replicated at other ART centres.

METHODS

Study design and study participants

Explanatory sequential mixed methods design was adopted for the project [2]. The quantitative component had cross-sectional survey among PLHIV and secondary data review. The qualitative component had In-Depth Interview (IDI) among program staff and Focus Group Discussion (FGD) among PLHIVs registered at the ART centres.

Study setting and sampling

The low, medium and high case load centres randomly selected were at Deoghar, Giridih, and Hazaribagh respectively. From each centre 50 patients were randomly selected from those who were attending the ART centre on the time of visit to the ART centre.

Quantitative survey and qualitative interview

Interviews of the patients were held at the ART centre. The survey questionnaire was designed as per the NACO guidelines on quality of care. It had details on socio-demographic parameters, perspective of PLHIV on counselling on HIV and ART related issues, the quality of care provided to the patients registered under accessibility, availability of waiting area, counsellor communication skills, supportive and helpful, confidentiality, discrimination/stigma, care during COVID-19 pandemic to access treatment and overall experience in the ART centre. Completeness of the treatment card maintained at ART centre were assessed by checking the treatment card maintained. PLHIV belonging to various groups were selected purposively for FGD. In-depth interviews were conducted among staff of ART centres using interview guide and the interview focus on the challenges faced by them and their perceived solutions.

Statistical analysis

Analysis comprised of description of categorical data using frequency and percentage. Major indicators like adherence and laboratory test were compared between ART centres using Chi-square test. The study proposal was cleared by IEC committee of AIIMS Deoghar.

FINDINGS

The socio-demographic details of participants were mentioned in Figure-1. Almost all patients reported that they were satisfied on all sorts of care and support provided by the staff of ART center. Among those who conveyed unsatisfactory, 42 (28%) were on social welfare schemes and 3 (2%) on psychological support. On quality-of-care parameter, 40 (26.6%) were unsatisfied about the accessibility. Overall, they all rated that their experience in ART center was satisfied. Review of the treatment cards revealed baseline investigations details were entered for 59 (39.3%), viral load for 118 (78.7%) and CD4 count for 81 (54%) of the patients completely. Adherence to treatment was high for 124 (82.7%), moderate for 14 (9.3%) and low for 12 (8%) of the patient's records checked.

Figure-1: Socio-demographic details of participants (N=150)

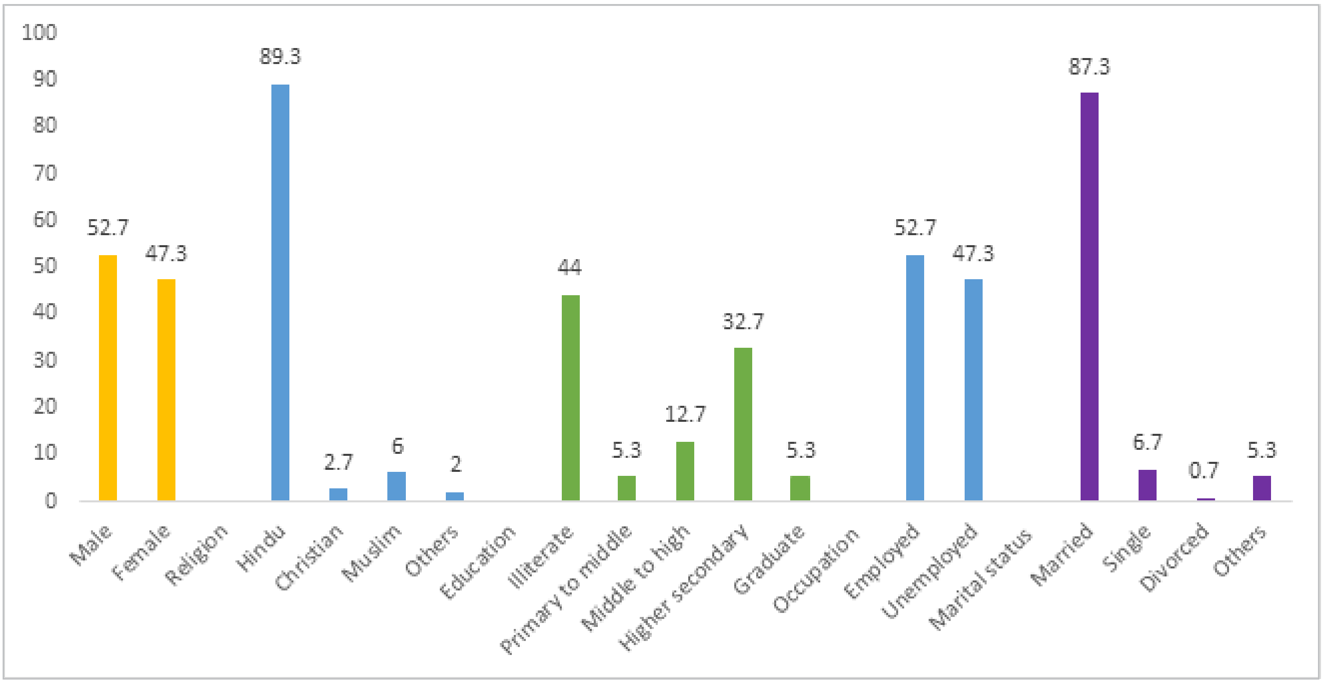

Table-1: Comparison of laboratory and drug adherence related information recorded at the various study ART center (N=150)

Characteristics	Overall (n=150) n (%)	Deoghar (n=50) n (%)	Giridih (n=50) n (%)	Hazaribagh (n=50) n (%)	p value#
Baseline tests					<0.001*
Complete	59 (39.3)	7 (14)	11 (22)	41 (82)	
Incomplete	45 (30)	38 (76)	7 (14)	0	
Not recorded	46 (30.7)	5 (10)	32 (64)	9 (18)	
Viral load					<0.001*
Complete	118 (78.7)	42 (84)	28 (56)	48 (96)	
Incomplete	16 (10.7)	0	16 (32)	0	
Not recorded	16 (10.7)	8 (16)	6 (12)	2 (4)	
CD4 count					<0.001*
Complete	81 (54)	32 (64)	2 (4)	47 (94)	
Incomplete	4 (2.7)	0	4 (8)	0	
Not recorded	65 (43.3)	18 (36)	44 (88)	3 (6)	
Adherence to ART					0.05
High	124 (82.7)	40 (80)	39 (78)	45 (90)	
Moderate	14 (9.3)	4 (8)	9 (18)	1 (2)	
Low	12 (8)	6 (12)	2 (4)	4 (8)	

Note: # p-value based on Chi-square test, *p-value<0.05.

The IDIs resulted in three themes namely infrastructure, manpower and services. Under theme infrastructure, it was noted that rooms were overcrowded, ventilation and lighting were inadequate, no cleanliness, building had no own electricity connection, no toilet and drinking water facility.

Counsellor of the Centre said:

"working space is inadequate and we sit very close to each other that it disturbs the dispersal of the work".

The staff nurse mentioned:

"due to lack of space PLHIV diagnosed to have TB and other PLHIVs sit in same overcrowded area, and this increases the risk of TB transmission to others."

Counsellor informed:

"during counselling patients feels hesitant to share their personal information related to risk behavior mainly due to lack of privacy."

Under the theme human resources, it was noticed that Medical Officer, counsellor, and CHS staff post were vacant. It was noted that bio-medical waste management was inappropriate, there was no issue related to drug supply, and CD4 kits were not available. FGD yielded 15 statements on strengths: adequate drug supply, no discrimination of PLHIV attending the center by the staff, and home care services. One of the patients said that "ART staff are very friendly and never shown disrespect towards us". Another patient who was a housewife admitted that "During COVID all drugs are provided at our doorstep". Challenges were non-availability of MO, stigmatizing the patients at Sadar hospital, minimal information on social welfare schemes, and difficulty in traveling to center.

CONCLUSIONS

Quantitative survey among PLHIVs on counselling service provided were satisfactory on many aspects except provision of information on social welfare schemes. Quality of care provided to the patients registered were satisfactory. Record review showed that except for the details on past antiretroviral treatment, pre-ART details, all others were entered. Adherence was better in Hazaribagh and poor in Giridih. Qualitative research findings convey that the infrastructure of all three ART centers need to be improved, rooms were overcrowded, ill ventilated, inadequately lighted, with no cleanliness.

RECOMMENDATIONS

1. Separate counselling rooms or cabins at ARTCs becomes important so that it ensures privacy and confidentiality for PLHIV.
2. Overcrowding in the consultation area to be avoided and cleanliness of the centres to be ensured.
3. Tracker list and death registers to be maintained at Deoghar and Giridih ART centres as per program guidelines.
4. Training of counsellors especially about public social protection schemes to be done.
5. Linkage with social welfare schemes and other National Health Programs (National Mental Health Program, National Program for prevention and control of NCDs).
6. Capacity building of PLHIV for mainstreaming in the society.

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Understanding the Reasons for Loss of Linkages and Estimation of Service Gap to Intervene in Testing, HIV Care and Support Strategy

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INTRODUCTION

HIV is a major global health issue, impacting approximately 38 million people worldwide, especially in low and middle-income countries. India, the second most affected country, has an estimated adult prevalence rate of 0.22%. Within India, Maharashtra has the highest number of people living with HIV. Despite progress in reducing mother-to-child transmission, HIV/AIDS continues to be a significant public health challenge in India. To address this, India has set specific targets for 2020, focusing on prevention, testing, treatment, elimination of mother-to-child transmission, and combating stigma and discrimination. Comprehensive prevention efforts are crucial to achieve an 80% reduction in new infections by 2025. The country has scaled up free and high-quality care, support, and treatment services since 2004, aiming for zero AIDS-related deaths in the future. Early detection through viral load monitoring is essential for successful treatment and prevention of disease progression.

Identifying at-risk populations is crucial for effective HIV monitoring. Risky sexual and drug-use behaviours contribute to HIV transmission, and efforts are being made to provide preventive services to these populations. Access to antiretroviral therapy (ART) has improved life expectancy and reduced AIDS-related deaths. However, living longer with HIV may lead to co-morbidities and potential adverse effects from long-term use of medication, posing challenges to sustained treatment. Addressing barriers to access, such as gender-based violence, human rights violations, and inequalities, is crucial for providing HIV services to high-risk populations. By combining acute care, rehabilitation, and a focus on human rights, India strives to improve the overall well-being and inclusion of those affected by HIV. Accurate estimation of disease burden in key populations is fundamental to inform policy and resource allocation.

This research endeavours to discern the intricate linkages within High-Risk Groups (HRGs) and their associated bridge populations, including biological children and sexual partners. Furthermore, it aims to explore the connections between these bridge populations and the general client base, facilitating a strategic analysis to gauge gaps in index testing and treatment. Additionally, the study seeks to appraise the barriers hindering access to HIV services. It delves into the interconnections between Integrated Counselling and Testing Centres (ICTC) and Antiretroviral Therapy (ART), examining factors such as disease burden, socio-economic stress, disability weights, co-infections like syphilis and HBV, and the potential impact of drug toxicity.

METHODS

From April 2017 to March 2021, comprehensive data was gathered from the Integrated Counseling and Testing Center (ICTC) and the Antiretroviral Therapy (ART) centers, at GMC Nagpur. This data encompassed a spectrum of parameters, including socio-demographic, clinical, immunological, virological details, treatment adherence cascade, and other pertinent factors. Microsoft Excel facilitated efficient data management throughout this process. Separate evaluations were conducted for high-risk groups (HRGs) and the general client population, meticulously assessing treatment algorithms and outcomes. This encompassed a scrutiny of viral load and immunological parameters. The analysis of factors linked to viral load suppression was executed utilizing Microsoft Excel tools.

Key population (KP) size estimates and the count of KP members living with HIV were sourced from community-based organizations operating under the National AIDS Control Program (NACP). Interviews, conducted with selected people living with HIV (PLHIV) meeting inclusion criteria and providing informed consent, were augmented by interactions with ART healthcare staff and community-based organization personnel, addressing concerns raised by HRGs. Validation of data involved cross-referencing information from the SOCH portal and the Master Line List (MLL) of the ART center.

For the period spanning April 2017 to March 2022, data encompassing HIV testing, ART registration, treatment, and outcomes was collated from the MLL of ART, the line list of positive general clients, and antenatal care (ANC). To mitigate the impact of the COVID-19 pandemic, a meticulous collection included individual, clinical, and family information. Linkages were traced for KPs and associated populations, validated through community-based organizations and credentials documented in the white card at the ART center. Inclusive criteria for interviews stipulated an age range of 18 to 45, knowledge of HIV status, availability of validated electronic data, and informed consent. PLHIV disinterested or with incomplete data were excluded. Due to incomplete follow-up data, the estimation of days living with disability (DLD) remained inconclusive.

FINDINGS

The study cohort comprised 237 participants, predominantly male. Sero-discordant individuals constituted the largest group, followed by prisoners, Men who have Sex with Men (MSM), and truck drivers. Among females, sero-discordant individuals were predominant, followed by sex workers and migrants. Gender disparities in HIV infection rates were evident, possibly influenced by physiological factors and societal biases. Analysis of HIV transmission patterns revealed elevated rates among female heterosexuals with regular partners compared to their male counterparts. Transmission rates by casual partners were comparable across genders. Instances of HIV transmission among homosexual and commercial partners were also observed. A noteworthy finding was that a higher plasma viral load increased the risk of sexual transmission of HIV.

The study showed that merely 19% of participants initiated on ART within 14 days of referral, consistent with previous studies reporting delays of 30 to 60 days. Contributing factors to this delay included prolonged clinical screening, multiple pre-ART initiation visits, and a lack of attendance for preparedness counseling. Notably, individuals with high-risk behaviours and psychological trauma necessitated intensive counseling and support. The burden of repeated visits to different hospital departments resulted in heightened stigma, fear of side effects, and financial constraints, collectively impacting clinic access and treatment adherence.

Baseline viral load levels were consistently high, underscoring the imperative need for timely initiation of ART. A majority of participants commenced ART with CD4 counts below 450 cells/mm3. Adherence rates exhibited variation, with migrants, sex workers, MSM, sero-discordant individuals, prisoners, and truck drivers displaying lower adherence. Positive adherence correlated with increased CD4 counts and viral load suppression, while poor adherence corresponded with decreased CD4 counts and heightened viral load.

Delayed initiation of ART with a high viral load was predictive of opportunistic infections at registration. Common barriers to treatment uptake included psychological impact, fear of side effects, denial of HIV status, and concerns about stigma. Practical obstacles such as transportation costs, time constraints, and the need for multiple hospital visits further impeded both ART initiation and adherence. The study strongly advocated for the incorporation of screening tools during ART preparedness counseling. This strategy aimed to identify individuals who would benefit from differentiated care services and encourage prompt ART uptake. The importance of monitoring and analysing high-risk populations, especially bridge populations, emerged as crucial for effective HIV prevention efforts.

CONCLUSIONS

In conclusions, this study highlights delays in ART initiation, demographic complexities, and adherence challenges among individuals with HIV. Contributing factors to the delay included prolonged clinical screening, multiple pre-ART initiation visits, and a lack of attendance for preparedness counseling. The burden of repeated visits to different hospital departments resulted in heightened stigma, fear of side effects, and financial constraints, collectively impacting clinic access and treatment adherence.

RECOMMENDATIONS

This study identified factors affecting ART adherence among HRG, including delayed initiation, psychosocial stigma, and time constraints. Adherence is crucial for effective ART, and viral load predicts HIV transmission. Consistent counselling and HRG-friendly ART setups are vital for adherence. These findings also inform policymakers as they plan gender-based prevention programs and reduce the HIV gender gap. Monitoring tools for HRGs can prevent HIV spread to the general population. Separate tools for HRG linkages and counselling at different ART stages is recommended to achieve program goals.

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Predictors of Lost to Follow-up from Antiretroviral Therapy among Adult HIV/AIDS Patients in Manipur: A Mixed-method Study

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INTRODUCTION

Human Immunodeficiency Virus (HIV) continues to be a major public health issue, having claimed 36.3 million lives so far. In 2004, Antiretroviral Therapy (ART) for people living with HIV (PLHIV) was introduced under the National AIDS Control Programme (NACP) and till date, more than a million lives have been improved by life-saving ART. AIDS-related deaths have gone down by almost 78% since their peak in 2005 and 66% since 2010. Since 2016, the World Health Organization (WHO) recommended that all HIV-positive patients should be provided with lifelong ART regardless of clinical status or CD4 cell count. However, India has the third highest burden of HIV in the world with an estimated 23.19 lakh (18.33 lakh–29.78 lakh) in 2020. Manipur has an estimated 27,989 PLHIV in 2021 and saw a high incidence of drug resistance (53%) and emergence of the recombinant virus (32%). Inadequate access to HIV prevention, care, and treatment services is a major contributing factor to approximately 2,580 deaths each day from AIDs-related causes.

India is committed to achieving the Sustainable Developmental Goal (SDG) of ending AIDS as a public health threat by 2030. Poor retention in care and lost to follow-up (LFU) are the greatest challenges in achieving this target. The lack of a patient follow-up system to monitor the LFU of this therapy produces significant public health issues like the risk of an emergence of medication tolerance, treatment relapse, hospitalizations, morbidity and mortality related with AIDS. The factors contributing to LFU can vary from place to place. Early identification of the magnitude and factors responsible for LFU is crucial to identify the vital intervention areas and improve the life of people living with HIV. Hence, this study is aimed to determine the factors associated with ART lost to follow-up.

METHODS

A mixed-method study (unmatched case-control and qualitative) was conducted among the adult HIV/AIDS patients attending the ART centre of the Regional institute of Medical Sciences (RIMS), a tertiary hospital in Imphal which is also an institute of centre of excellence for adult ART, between January to April 2023. The study was approved by the Research Ethics Board of the Institution. A sample size of 280 (70 cases and 210 controls) was calculated, using Epi Info version 7.2 with the following assumptions for an unmatched case control study design: 95% confidence interval, 80% power, 1:3 case-to-control ratio, 1.4% exposure among the controls and 6.25 OR of association between the WHO clinical stage IV predictor variable and developing loss to follow-up from the previous study. Records of all HIV-positive adult patients ⩾18 years of age who were enrolled between 1 January 2018 and 31 December 2022 were reviewed. Cases were those HIV patients who were lost to care and did not receive any clinical, laboratory, or pharmacy services for at least 90 days (three months) from the last visit and did not return. Controls were HIV patients on routine care with clinical, laboratory, or pharmacy services for at least 90 days. Cases and controls were identified from records by convenience sampling. Socio-demographic characteristics as well as baseline clinical and laboratory data were extracted using the Google form. Data was exported into Microsoft Excel and after cleansing, analysed in SPSS 26.0. Variables with p-value <0.2 in univariate analysis were entered for logistic regression. A p-value <0.05 was considered significant. For qualitative component, ART centre counsellors and patients who had an episode of LFU but traced and returned to treatment were purposively selected and in-depth interviews were done until saturation point was achieved. Interviews were transcribed verbatim and thematic analysis was performed to identify barriers and facilitators for LFU.

FINDINGS

Total HIV patients registered at the ART centre from 2018 to 2022 was 1566 of which 1511 (96.5%) were 18 years and above. Out of this, 1511 adults registered, 1429 were initiated on ART with 70 (4.8%) of them lost to follow-up. All 70 cases were included in the study. The mean age of the cases was 37.93±10.77 and that for controls was 40.12±11.77. Patients in the majority of cases (57.14%) and controls (54.28%) were males. The median (IQR) duration of treatment in years was 0.72 (0.17–1.79) for cases and 4.06 (3.18-4.59) for controls. The majority of adult HIV/AIDS patients initiated on ART at the centre were heterosexual among both cases (77.14%) and controls (71.42%). Most of the cases (41.42%) and controls (36.61%) were educated up to the primary level. The most frequently used ART regimen in both cases (67.14%) and controls (73.33%) was Tenofovir+Lamivudine+Efavirenz.

Gender, risk factors for HIV, educational status, marital status, baseline haemoglobin, habit of alcohol use and smoking, HBV and HCV status were comparable among cases and controls (p>0.05). The median treatment duration (p=0.000) was lower in individuals on ART who were loss to follow-up. The proportion of participants from hill districts as compared to those from valley districts (p=0.000) was more among cases than control. Cases had more patients in the WHO clinical stage III and IV at the first visit relative to stage I and II (p=0.019). More of the patients were bedridden at their first visit to the ART centre instead of ambulatory or working (p=0.011) as compared to the controls.

Binary logistic regression showed that the functional status of the individuals with HIV/AIDS during their first visit to the ART centre and residential district were significant predictors of loss to follow-up. Those who were bedridden at the time of their first visit to the ART centre had higher odds [aOR:4.61(1.02–20.91)] of being loss to follow-up as compared to those who were working or ambulatory. Those who were from hill districts [aOR:2.79 (1.55–5.02)] had higher odds of being loss to follow-up when compared to those who were from valley districts. An increase in the treatment duration [aOR:0.26(0.18–0.37)] had lesser odds of being loss to follow-up.

Qualitative components identified patient characteristics like poor health condition, side effects of medicines, injecting drug use relapse, poor understanding of HIV disease or ART, competing commitments, including their jobs or education; health service-related factors like suboptimal quality of services due to staff shortage, poor communication and insensitive staff behaviour as barriers for treatment adherence. Lack of family support, fear of stigma, and misinformation by quacks also contributes to LFU. However, multi-month dispensing of drugs, tracking and reminders, and networking with NGOs and local clubs were identified as facilitators for ART adherence.

CONCLUSIONS

The likelihood of adult HIV/AIDS patients on ART being lost to follow-up decreased with treatment duration. Those with a bedridden functional status at their first visit to the ART centre and those patients from hill districts had a higher chance of being loss to follow-up. Qualitative components identified injecting drug use relapse, poor knowledge of HIV and ART among PLHIV, insensitive staff behaviour, poor communication between the ART centre and other departments where patients were referred to and lack of family support were identified as barriers to ART adherence. Multi-month dispensing and networking with other organizations were identified as facilitators for treatment adherence.

RECOMMENDATIONS

Initiatives including multi-month dispensing of ART drugs and strengthening of counselling services for HIV/AIDS patients is crucial to improve treatment retention, especially in the early months of treatment initiation, given that early adherence predicts a lower chance of developing loss to follow-up in the course of ART. Constructing an enabling patient-friendly environment at ART centres by organizing regular monthly forums of the health care providers and ART centre attendees will help to address gaps in knowledge regarding the disease and treatment along with re-orientation and sensitization programmes of the health care providers towards patient care and treatment adherence.

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Risk Factors for Mortality among Adult HIV/AIDS Patients on Antiretroviral Therapy in Manipur: A Mixed-method Study

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INTRODUCTION

The introduction of Antiretroviral Therapy (ART) has led to the significant survival gains previously seen only in developed countries. In India, the national adult prevalence continued to decline from an estimated level of 0.54% in 2000–2001 to 0.22% in 2020. There were approximately 51,000 deaths among PLHIV in 2020, with almost 63% being AIDS related. While antiretroviral drugs have been available in the country since 2004, the annual new infections and acquired immunodeficiency syndrome (AIDS) related deaths have gone down by more than 60% and 70% respectively. Although the antiretroviral regimens routinely used have a potent pharmacological ability to suppress HIV RNA replication, the actual attainment of viral control, restoration of health, and achievement of long-term survival in the real world is less certain. Studies from various parts of the world show that older age, lesser CD4 cell count, poor nutritional status, late diagnosis, and the presence of comorbidities were the most important predictors of death among HIV patients. The ability to identify those who are at high risk for developing AIDS and for dying is important in determining management guidelines and decreasing the morbidity and mortality. However, most of the studies have examined hospitalized patients who are more likely to present in an advanced stage of the disease and may have missed a large proportion of infected people who have not sought medical care due to better health. The objective of this study is to assess the risk factors associated with death in adults receiving antiretroviral therapy from the ART centre.

METHODS

A mixed-method study (case-control and qualitative) was carried out among the adult HIV/AIDS patients treated at the ART centre, RIMS, a tertiary hospital in Imphal, between January to April 2023. It has been a centre of excellence for adult ART since 2004. There are 11 Link ART Centres (LAC) and four care support centres located across nine districts of Manipur. As per the HIV report 2019, the prevalence of adult HIV in Manipur is 1.18% and 1,082 people died of AIDS/related complications. The study was approved by the Research Ethics Board, RIMS. A total sample of 206 (103 cases and 103 controls) was calculated using a 95% confidence interval, 80% power, 1:1 case-to-control ratio, and taking 40% proportion of exposure among the cases and 22% exposure among the controls, where exposure is a haemoglobin level less than 10gm% from a previous study. Records of all HIV-positive adult patients $\geqslant$ 18 years of age who were initiated on ART between 1 January 2015 to 31 December 2022 were reviewed. Cases were HIV patients who had expired during their course of ART. Controls were patients who were alive at the time of data collection. Socio-demographic characteristics, baseline clinical and laboratory data were extracted using

using a structured Google form. Data was exported into Microsoft Excel, 2016; cleansed and analysed in IBM SPSS V. 26. Descriptive statistics like mean, SD and proportions were used to summarize the characteristics of the patients. Variables with p-value <0.2 in univariate analysis were entered for logistic regression and p value <0.05 was considered significant. For qualitative components, key informants; deceased patients' family members/relatives aged 18 years and older, counsellors, and NGO outfield workers were interviewed. Interviews were transcribed per verbatim and thematic analysis was performed to explore and understand various factors associated with deaths among patients who were on ART.

FINDINGS

Mortality recorded among the total 2623 HIV/AIDS patients aged 18 years and above who were initiated on ART at the centre during the period from January 2015 to December 2022 was 333 (12.7%). The mean age in years of the cases was 44.17±10.93 and that of the controls was 41.70±10.85. Patients in the majority of the cases (74.7%) and controls (54.28%) were males. The mean duration of treatment in years was 2.09±2.05 and 4.32±1.88 among cases and controls respectively. The majority among the cases (67%) and the controls (78.6%) were heterosexual. Most of the cases (39.8%) and controls (35%) were educated up to the primary level. A majority of the participants in both cases (63.1%) and controls (60.2%) were married. The mean baseline haemoglobin level among the cases and the controls was 11.26±9.37 and 11.47 ± 2.48 respectively.

Age, the district where the patients reside, HIV risk factors, baseline haemoglobin, educational and marital status were found to be comparable among the cases and the controls. Males (aOR 13.43; 3.96–45.54), patients of the other backward classes' category (aOR 3.35; 1.24–9.04) and being bedridden at the time of the first visit to the ART centre were the factors which remained significantly associated with the mortality of patients on ART on regression analysis.

The qualitative component revealed that alcohol consumption or relapse to drug use, associated comorbidity, lack of knowledge regarding HIV/AIDS among the PLHIV and family members, and stigma and discrimination were the factors leading to delayed diagnosis and irregular treatment and hence death. The staff stated that time and space constraints due to a higher patient load contributed to the unsatisfactory quality of care given. Lack of co-ordination between the ART centre and other departments for follow-up of ART, thereby reducing treatment retention, was also identified as a factor leading to mortality.

CONCLUSIONS

Mortality among adult HIV/AIDS patients on ART was significantly associated with the male gender and a bedridden functional status at the time of ART initiation. Alcohol consumption or relapse to drug use, associated comorbidity, lack of knowledge regarding HIV/AIDS among the PLHIV and family members, stigma and discrimination were identified as the main reasons for mortality. Time and space constraints of the ART service and lack of co-ordination between the ART centre and other departments for follow-up of ART were projected by service providers as factors that contributed to mortality.

RECOMMENDATIONS

The study's findings highlight the need to strengthen the HIV treatment and care system, focusing on the early enrolment of patients for treatment and retention to care and developing a tailored approach to counselling of PLHIV with different risk factors. Ensuring establishment of a network with rehabilitation centres for PLHIV with alcohol and drug use will improve treatment adherence. Coordination and efficient communication between the ART centre and different departments referring patients to the centre can be facilitated by reorientation of the staffs and organizing update meetings regularly. Taking appointments and planning slots for the day can help manage space and time constraints and improve the quality of care.

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Barriers to Access Viral Load Testing and Adherence to Treatment amongst PLHIV at ART Dimapur

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INTRODUCTION

HIV infection is responsible for one of the most devastating human pandemics. However, since 1996, therapeutic regimens have been introduced and have contributed to the transformation of an HIV infection into a treatable chronic disease. The Viral Load Test helps to find out whether someone's treatment is working or not. Earlier studies showed that the most common barriers were the cost of ART and financial concerns, lack of information about ART, stigma, dissatisfaction with health care services, overburdened health care services, side effects of medications, inconvenience about taking medications daily, and forgetting to take medications. According to the National AIDS Control Organization (2021), VLT done in the Public Private Partnership Laboratory in Nagaland is 6,651 (2020–2021).

OBJECTIVES

To explore the Viral Load Testing procedures, reasons for test refusal, and ART adherence among people living with HIV (PLHIV) in Dimapur district of Nagaland.

METHODS

The study investigated 'Barriers to Access Viral Load Testing and Adherence to Treatment Amongst People Living with HIV (PLHIV) at ART Dimapur' in Nagaland's Dimapur district. According to the DAPCU records as of February 2022, there were 4,091 registered PLHIV from 2016–17 to 2020–2021, consisting of 2,306 males and 1,785 females. The study selected a total of 100 PLHIV through systematic random sampling, with 20 males and 20 females from each year, and sampling details were carefully coordinated with the ART Centre counsellors. The study included PLHIV aged 13 and above. It utilized secondary sources such as books, research articles, and reports to provide the context, while primary data was gathered through semi-structured interviews. Descriptive statistics were employed, and the data was presented using tables and charts. Qualitative data was categorized and integrated to provide explanations for the quantitative findings.

FINDINGS

Profile of the Respondents

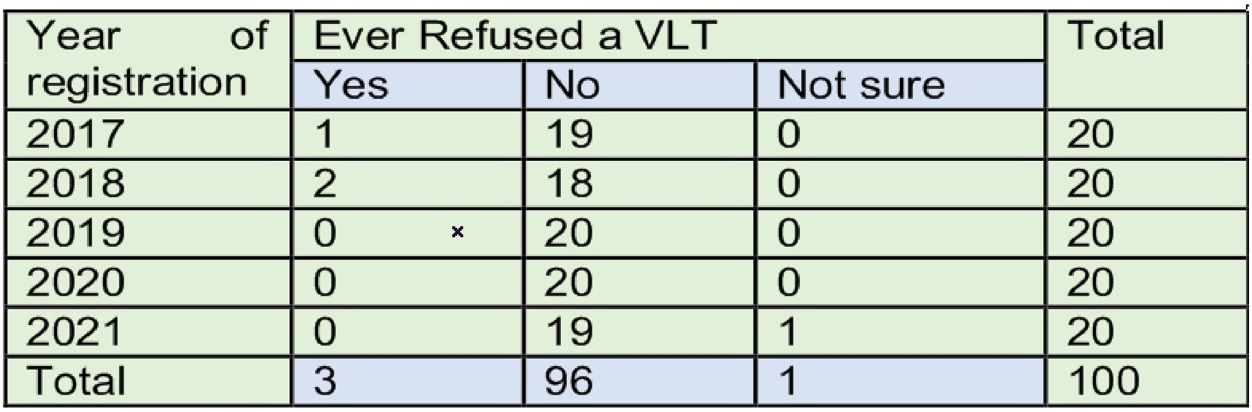
Of the total 100 participants, 29% of the respondents were in the age group of 21–28, and 4% in the age group of 53–60; 78.0% were married, and 2% mentioned other marital statuses; 51% studied up to middle school, and only 3% were post-graduate. Among the 50 male respondents, 14% were government employees and only 3% were unemployed. Among the 50 female respondents, 31% were housewives, and 6% were unemployed.

Table-1: Viral Load Testing among PLHIV in Dimapur by Year of Registration

No. of VLT done	Year of registration					Total
	2017	2018	2019	2020	2021	
1	2	1	1	0	2	6
2	0	2	3	4	12	21
3	3	5	7	6	3	24
4	4	5	4	6	2	21
5	0	1	2	2	0	5
6	2	1	3	2	0	8
7	2	0	0	0	1	3
8	7	5	0	0	0	12
Total	20	20	20	20	20	100

The data presented in the table above highlights that the number of Viral Load Tests (VLTs) varies among respondents registered in different years. The maximum number of VLTs conducted was eight times among the seven respondents who registered in 2017, and five times among those who registered in 2018. The minimum number of VLTs conducted was just one among the six respondents registered in the years 2017, 2018, 2019, and 2021, respectively. These findings demonstrate the diversity in VLT frequency within the study population across different registration years.

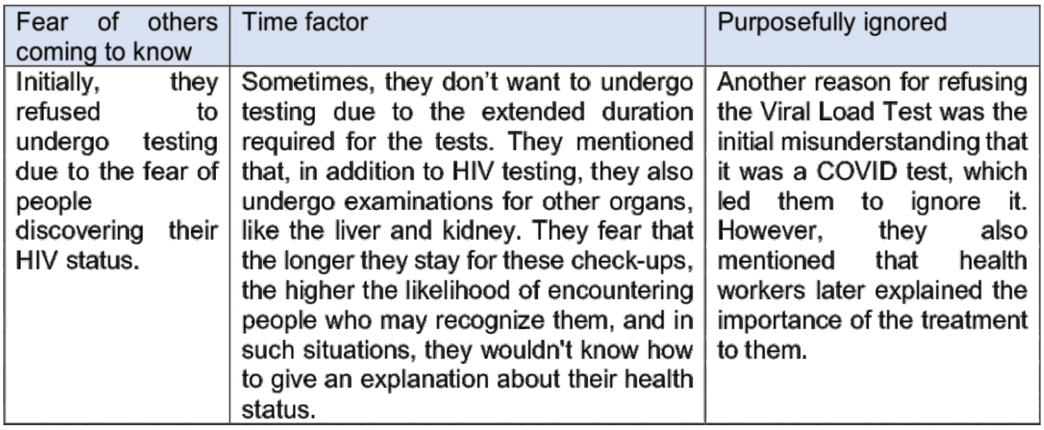
Table-2: Refusal of Viral Load Testing among PLHIV



Year of registration	Ever Refused a VLT			Total
	Yes	No	Not sure	
2017	1	19	0	20
2018	2	18	0	20
2019	0	20	0	20
2020	0	20	0	20
2021	0	19	1	20
Total	3	96	1	100

The table shows that 96 of the respondents stated they have never refused to go in for a VLT. Three respondents (one registered in 2017 and two respondents registered in 2018) among the older patients had refused. The qualitative data shows some of the reasons for refusal.

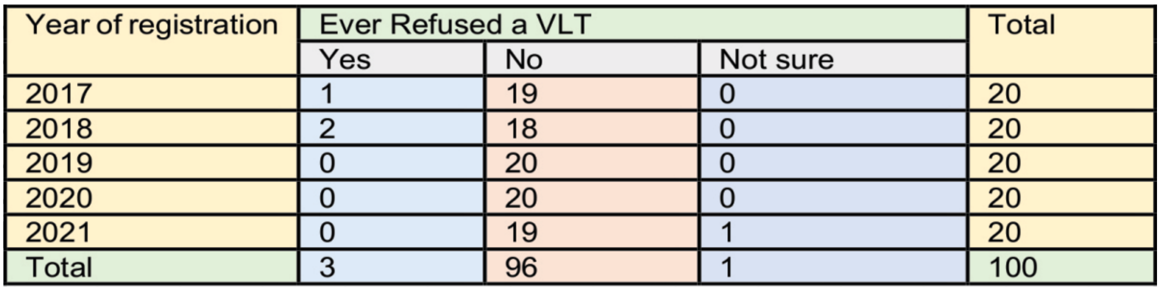
Table-3: Reason for Refusal of Viral Load Testing



Fear of others coming to know	Time factor	Purposefully ignored
Initially, they refused to undergo testing due to the fear of people discovering their HIV status.	Sometimes, they don't want to undergo testing due to the extended duration required for the tests. They mentioned that, in addition to HIV testing, they also undergo examinations for other organs, like the liver and kidney. They fear that the longer they stay for these check-ups, the higher the likelihood of encountering people who may recognize them, and in such situations, they wouldn't know how to give an explanation about their health status.	Another reason for refusing the Viral Load Test was the initial misunderstanding that it was a COVID test, which led them to ignore it. However, they also mentioned that health workers later explained the importance of the treatment to them.

Adherence to Treatment by PLHIV

Adherence in HIV treatment is crucial for maintaining low viral loads, preventing drug resistance, and lowering the risk of virus transmission. This cross-tabulation table shows the relationship between the year and whether individuals have ever refused a Viral Load Test.



Year of registration	Ever Refused a VLT			Total
	Yes	No	Not sure	
2017	1	19	0	20
2018	2	18	0	20
2019	0	20	0	20
2020	0	20	0	20
2021	0	19	1	20
Total	3	96	1	100

Across the dataset, a total of three individuals (3%) admitted to refusing a VLT, 96 (96%) did not refuse, and one (1%) was unsure if he/she had refused. In 2019 and 2020, none of the respondents admitted to refusing a VLT, indicating 100% adherence. The data suggests that refusal of VLTs was relatively low, with a slight increase in 2018, but the majority of individuals in each year did not refuse to take the test.

Figure-1: Knowledge of time and frequency for VLT

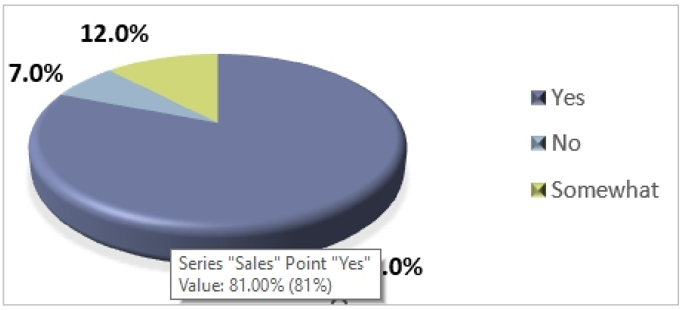
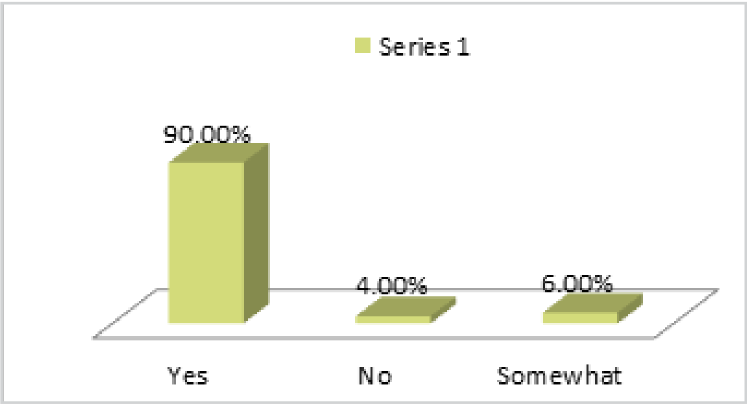


Figure-2: Knowledge of reason and purpose for VLT



The figure above illustrates that a significant number of the respondents are aware of the reasons for conducting the VLT for PLHIV. 90.0% of the respondents indicated that they are well informed about the purpose of the test. 6.0% mentioned having a partial understanding, while 4.0% admitted not knowing the reasons behind the VLT but noted that they undergo the VLT based on the advice provided by counsellors.

CONCLUSIONS

The study highlights a diversity in the frequency of Viral Load Tests (VLT) among different registration years. Refusal of VLTs was relatively low but fear of HIV status disclosure, concerns about the waiting period for tests, and confusion with COVID testing were some of the reasons cited for refusal. Most respondents were aware of the recommended timing and frequency for VLT.

RECOMMENDATIONS

To improve accessibility and reduce the long waiting period for VLTs at the ART Centre, and to counsel patients about the stigma associated with HIV, it is advisable to establish ART centres at the block level. This would not only minimize travelling from long distances and the waiting time for VLTs but also aid in the monitoring and tracking of people living with HIV (PLHIV) for VLTs.

Customized community education programmes should be developed to address the lack of awareness about. VLT. These programmes should be strategically tailored for both rural and urban areas, emphasizing the availability of free check-ups, as many individuals are uninformed about the testing process until they consult with health care providers.

ACKNOWLEDGEMENTS

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A Study to Understand Quality of Life (QOL), Health Status and Life Satisfaction among PLHIV on TLD Regimens in Puducherry

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INTRODUCTION

As per the India HIV Estimation 2017 report, national adult (15–49 years) HIV prevalence in India is estimated at 0.22% (0.16%–0.30%). The quality of life (QOL) and health status of PLHIV has been steadily becoming better due to the availability of effective ART (Antiretroviral Therapy). In 2019–20, the new regimen comprising Tenofovir, Lamivudine, and Dolutegravir (TLD) was rolled out as first line ART (Antiretroviral Treatment). The shift to the new regimen happened partly during the COVID-19 pandemic and its effect has not been fully assessed. The QOL of PLHIV on various regimens of ART has been assessed periodically. However, there is no published literature on the QOL of patients receiving the new regimen of TLD. Hence this study was planned to assess the QOL, life satisfaction, and health status of PLHIV receiving the TLD regimen.

METHODS

The study was designed as a descriptive cross-sectional study done in the ART centre of the Indira Gandhi Medical College and Research Institute (IGMC & RI). The sample size was estimated to be 384. A consecutive sampling technique was followed among patients visiting the ART centre on the TLD regimen. After obtaining Institutional Ethics Committee (IEC) clearance, consenting patients were administered a questionnaire by the investigator for assessing the quality of life, the Tamil version of the WHO_QOL BREF Questionnaire, which has been validated in the local language. Clinical and demographic details were also collected. Satisfaction with life was assessed using the Satisfaction with Life Scale (SWLS) questionnaire. Health status was assessed with the Short Form Health Survey (SF-36) questionnaire. Confidentiality of the collected data was ensured. Data was captured using the Epicollect5 application and analysed using the Statistical Package for the Social Sciences (SPSS) version 20. P value less than 0.05 was considered as significant.

FINDINGS

A total of 370 patients were recruited. The mean age of the patients was 45.48 (SD 10.54). The mean duration of diagnosis was 128.14 months (SD 71.23). Treatment was started at a mean duration of 110.48 months back, while the mean duration of TLD regimen treatment was 20.55 months. The male: female ratio was 1:1.1. Quality of life was higher in the environmental (Mean 69.08+/- SD 11.3) and the psychological domain (mean 60.57+/- SD10.37) (Figure 1); 57 patients were dissatisfied with their life, seven patients were neutral, and 299 patients had varying grades of satisfaction with their life. In health status, the highest score was for health change and physical functioning and lowest for emotional well-being.

Men had a significantly better quality of life than females, especially in the psychological and social relationships' domain. There was no significant difference of quality of life across the age and location span of the patients. Patients living with their families had a significantly better quality of life across all domains compared to those patients living alone. Quality of life was significantly better among highly educated PLHIV, especially in the social relationship's domain. Married PLHIV have a significantly better quality of life in psychological, social relationships and environmental domains. Quality of life was significantly higher in the milder stage of disease, overall, and it was better when social support was present.

CONCLUSIONS

Efforts to increase social support could increase the quality of life and satisfaction with life. Early diagnosis could prevent advanced disease stages which could also increase the quality of life and life satisfaction.

RECOMMENDATIONS

Early diagnosis and treatment with a TLD regimen by active case-finding in high-risk groups, contact tracing and testing can increase the quality of life. Increasing access to counselling services and social support services can be brought about which could increase the quality of life and satisfaction with life. Special attention to women living with HIV and people living alone can decrease their burdens.

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Low Retention Rate of PLHIV at ART Centre: An Insight into Baseline Data and Associated Factor from a Cross-sectional Study in Kota Zone, Rajasthan

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INTRODUCTION

The primary goal of antiretroviral therapy (ART) is to reduce HIV-associated morbidity, mortality, and transmission of HIV at the population level [2]. The low- and middle-income countries like India, contributed to 86.5% (5.2 million) of the total number of people living with HIV (PLHIV) and accessing ART worldwide [4]. However, early mortality and retention of PLHIV in care after initiation of ART remain significant challenges for the national ART programmes in developing countries [5,6]. Loss to follow-up (LFU) to ART is an independent risk factor for the development of drug resistance resulting in treatment failure and mortality [7,8]. Early initiation of ART and retention in care are critical to maximize survival and preventive benefits of ART [9]. Adherence to ART is of paramount importance to achieve the optimum control of viral load and progression of disease among PLHIV. Adherence to lifelong treatment for HIV/AIDS is interfered by several factors resulting in the need for second and tertiary line antiretroviral drugs. The nature of influencing factors for ART adherence is complex as it involves factors from the person, society, health system, and the progressive disease condition. [10] Therefore, recognition of these influencing factors will help in reinforcing the conditions favouring adherence to ART.

OBJECTIVES

To determine the socio-demographic, clinical, and immunological variables/factors associated with loss to follow-up (LFU),

To identify the reasons of default from ART care

METHODS

PLHIV aged ⩾15 years and who were initiated on ART from 1 January 2017 to 31 December 2020 at the selected ART centre were included in the analysis. We analysed four years of follow-up data of PLHIV initiated on ART in the given period to estimate the mean cumulative survival probability, and to determine the factors associated with loss to follow-up. LFUs/opted-out were contacted by face-to-face interviews in the form of a pre-structured questionnaire with open-ended questions to search and analyse the possible factors behind the discontinuation of ART. In-depth interviews of counsellors were also taken. Socio-demographic and clinical data was obtained from the patient treatment cards available at the ART centres. The data was collected in a pretested questionnaire, tabulated and analysed in

Microsoft Excel 2019. Analysis was performed by Pearson's Chi square and values $p<0.05$ were taken significant. The quantitative data was expressed in terms of numbers and percentages. After being contacted by counsellors, LFUs/opted-out patients were interviewed in person/face-to-face for collection of data either at an ART centre or at a place of the patient's convenience.

FINDINGS

The study was done on 201 PLHIV. Out of them, 173 were opted-out and 28 were LFU. It is shown in the following graph and table that 44% (N-89) PLHIV of the age group 16–30 and 36% (N-73) PLHIV of the age group 31–45 were mostly deviated from ART.

Figure-1: Age-wise deviation from ART

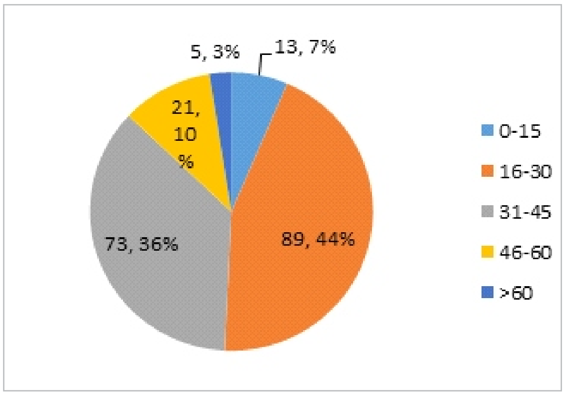


Table-1: Distribution of Study Participants by Age & Gender

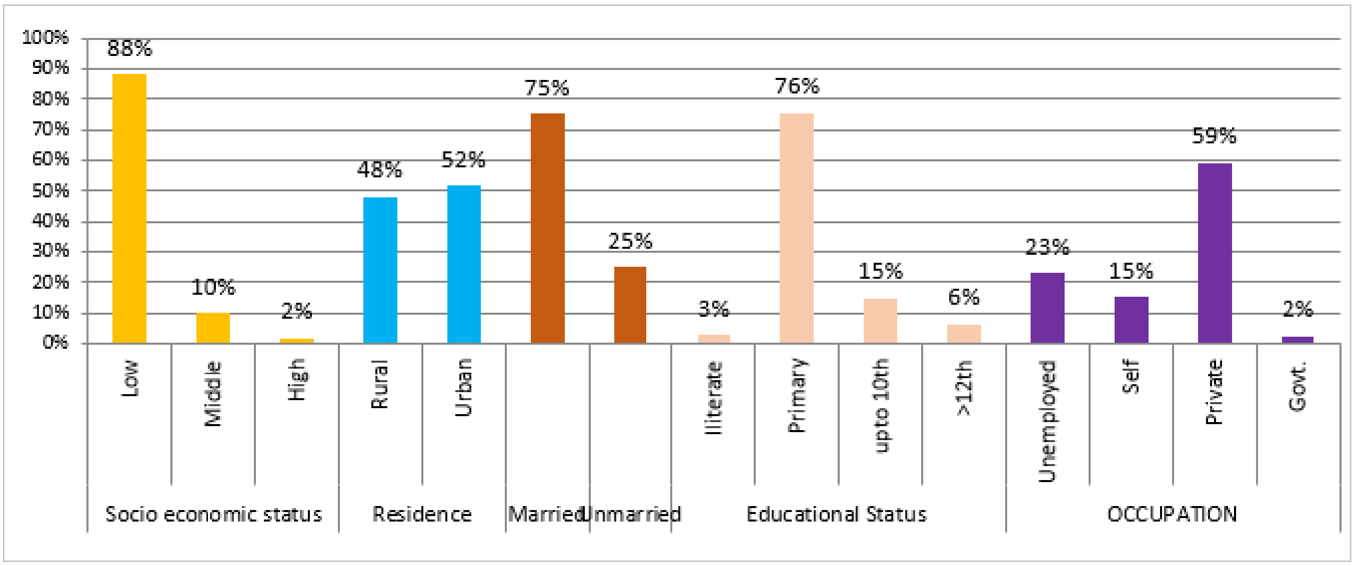
Age group in Yrs.	Male	Female	Total
0-15	6	7	13
16-30	62	27	89
31-45	53	20	73
46-60	11	10	21
>60	2	3	5
TOTAL	**134**	**67**	**201**

There is not much difference among urban and rural populations in opt-out or LFU patients. The ratio of the urban and rural populations is almost the same for opted-out or LFU which is about 50%. It is found that 88% (N-177) PLHIV who opted out or LFU had a low socio-economic status. Deviation from ART is more among married people, i.e., 71% (N-151) as compared to unmarried PLHIV.

Table-2: Distribution of Socio-Demographic and Economic Characteristics of PLHIV by their treatment status (Opt-out and LFU)

	Socio-economic status			Residence				Educational Status				Occupation			
	Low	Middle	High	Rural	Urban		Unmarried	Illiterate	Primary	up to 10th	>12th	Unemployed	Self	Private	Govt.
OPT OUT	155	14	4	82	91	128	45	5	147	11	9	39	31	100	3
LFU	22	6	0	15	13	23	5	1	5	19	4	7	0	19	2
TOTAL	177	20	4	97	104	151	50	6	152	30	13	46	31	119	5
	88%	10%	2%	48%	52%	75%	25%	3%	76%	15%	6%	23%	15%	59%	2%

Figure-2: Causes for deviation from ART (in percentages)



It is evident from data that 76% of opted-out or LFU PLHIV is had only availed of primary education. Out of a total of 172 opted-out PLHIV, 147, i.e., 85% have had only primary education. PLHIV who are in private jobs are mostly opted-out and data shows that 58% (N-100) opted out and 67% (N-19) LFU are have private jobs.

Figure-3: Percentage of various causes for deviation from ART

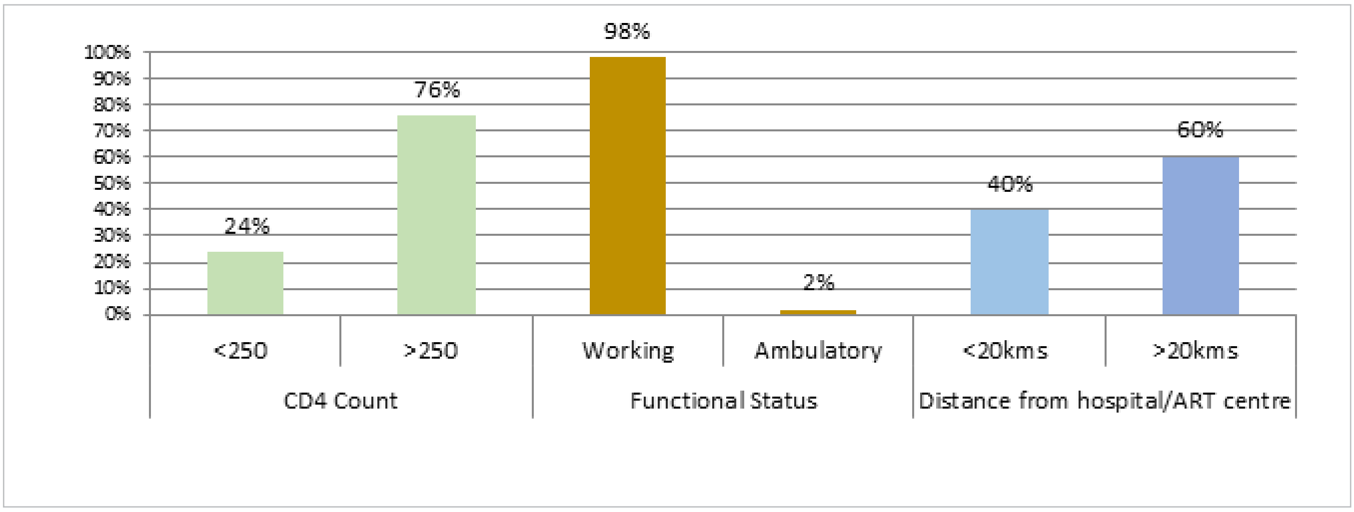


Table-3: Distribution of CD4 count, Functional Status and Distance from ARTC by PLHIV treatment status (Opt-out and LFU)

	CD4 Count		**Functional Status**		**Distance from Hospital/ART Centre**	
	<250	**>250**	**Working**	**Ambulatory**	**<20kms**	**>20kms**
OPT-OUT	43	130	170	3	70	103
LFU	5	23	27	1	10	18
TOTAL	48	153	197	4	80	121
	24%	76%	98%	2%	40%	60%

It is found by analysing the data that 60% (N-121) reside more than 20 km away from the ART centre (60% among opted-out and 64% among LFU). 98% (N-170) out of the total opted out and 97% (N-27) out of the total LFU are working. If we look for the CD4 count it is seen that 76% (N-153) PLHIV opted-out/ LFU when their CD4 count have more than 250. 75% (N-130) PLHIV are opted-out and 82%(N-23) are LFU with a CD4 count of more than 250.

Data shows that 54% (N-94) opted out and 21% (N-6) LFUs were found because of disturbances in their daily pursuits due to visits to the ART centre. If the number of dependent members in the family is more than two the opt-out is 41% (N- 71). 39% (N-11) LFUs are so because of the distance of the ART centre from the residence. It is found that opted-out is 94% (N-163) and LFU is 82% (N-23) where there is only single earning member in family.

CONCLUSIONS

The main cause of opted-out or LFUs is distance to the point of care and disturbance in daily pursuits due to the ART centre visits. The study shows that 54% opted-out and 21% LFUs are due to disturbances in their daily routine and 39% LFUs are due to the distance of the ART centre from their residence. Furthermore, a goal-directed approach towards young adults (44% of the age group of 16–30), the low socio-economic strata (88%) and less educated subjects (85% primary education) will be fruitful as these include the most deviated subjects.

RECOMMENDATIONS

Strengthening of Link ART plus centres and deciding for provision of ART directly to patients by health care workers will definitely decrease the cost and distance patients need to travel and thereby improve retention in care. As less educated PLHIV were also more likely not to report back, special attention should be given to this group in the counselling sessions at the time of initial registration of patients in the ART centre. Furthermore, there are young adult patient and concordant couples whose problems need to be addressed to reduce LFU. We recommend the need to scale-up the programme in respect to more referral centres and viral load facilities to strengthen patient–provider interactions.

ACKNOWLEDGEMENTS

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Late Detection of HIV Infection: Epidemiological Features, Consequences and Strategies to Encourage Earlier Testing

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INTRODUCTION

Acquired Immuno Deficiency Syndrome (AIDS) is a potentially dangerous life-threatening condition caused by the human immunodeficiency virus (HIV). Successful treatment of AIDS depends on diagnosis of HIV in the early stage in people suspected to have been infected. Early diagnosis and treatment are one of the most effective ways to prevent the spread of HIV infection and to protect the health of those who are HIV-positive. It helps people with HIV to get and start timely appropriate antiretroviral treatment. The timely and appropriate use of antiretroviral treatment suppresses the virus load in the body which helps to reduce the risk of morbidity and mortality in people. Despite the importance of an early diagnosis of HIV in patients' treatment, the studies show that late diagnosis has remained a major problem for the control and prevention of AIDS in the world. Late detection of HIV adversely reduces the effectiveness of antiretroviral therapy (ART), thereby increasing the risk of morbidity and mortality in patients. Late detection of HIV also increases the probability of transmission and spread of the disease in people and as a result, control of the disease becomes harder. This study summarizes recent evidence on the epidemiology of late presentation and its impact on clinical progression, and describes several key strategies that may encourage an earlier diagnosis.

METHODS

This was a retrospective type of study which was conducted in the Integrated Counselling and Testing Centre (ICTC) section of the Microbiology Department of the Government Medical College and attached hospitals in Kota for a period of four months from September 2022 to December 2022. A total of 110 HIV-positive patients with a CD4 count less than 200/mm3 from the last two years who gave consent (NACO guideline 2017) were included in this study. The study proposal was approved by the Institutional Ethics Committee of Government Medical College, Kota. After an extensive literature review, to identify reasons for late diagnosis of HIV in various settings, we conducted semi-structured, in-depth interviews at the ART centre for patients with a CD4 count of less than 200/mm3 and those were scheduled for a continuous follow-up. A questionnaire was exclusively designed for this study to identify the socio-demographic, behavioural characteristics and psycho-social factors that might be associated with the late presentation of HIV infection. After the questionnaire was filled out, the medical history of the patients was collected to find out the HIV infection stage, comorbidities, and the lymphocyte CD4 count at the time of diagnosis. The term 'late presenter; was not used during the interviews, to avoid any potential stigma from this health care provider-centred term. Interviews were conducted in Hindi, English, or the local language and lasted between 35 to 65 minutes. A supervisor monitored the quality of data collected by the field investigator every week. Every 15-day investigator recalled a meeting with the supervisor and checked the completeness of the data. Road maps were revised time to time and debriefs given to pinpoint difficulties with the principal investigator.

FINDINGS

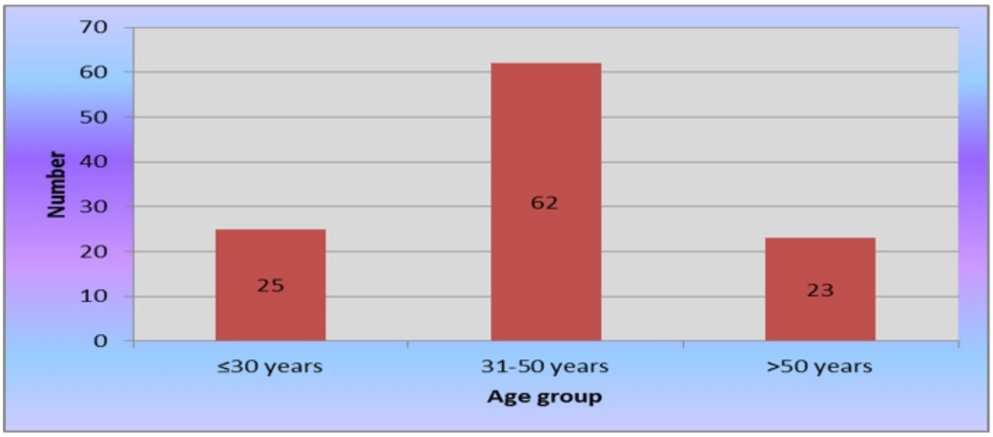
This study was done on 110 patients who were diagnosed late for HIV with a CD4 count of less than 200/mm3. Out of 110 patients, 25 patients were in the age group ⩽30 years (22.7%), 62 patients were in the age group of 31–50 years (56.4 %) and 23 patients were in the age group >50 years (20.9 %) (Figure I).

In this study, the mean age was 40.46 years with a standard deviation of 13.126. The mean C 4 count was 96.79 with a standard deviation 47.081.(Table I)

Table-1: Descriptive Statistics of CD4 counts

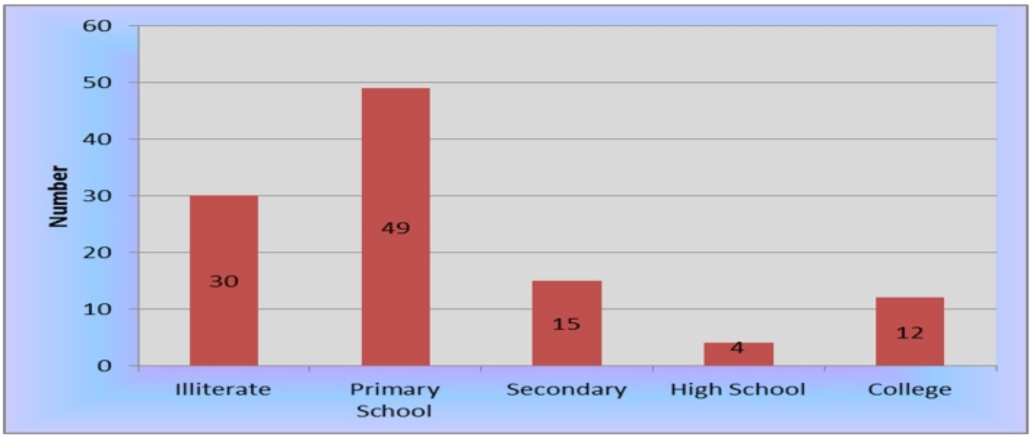
N	Mean	SD	Median	Minimum	Maximum
110	96.79	47.081	95.50	20	198

Figure-I: Distribution of Study Population by Age



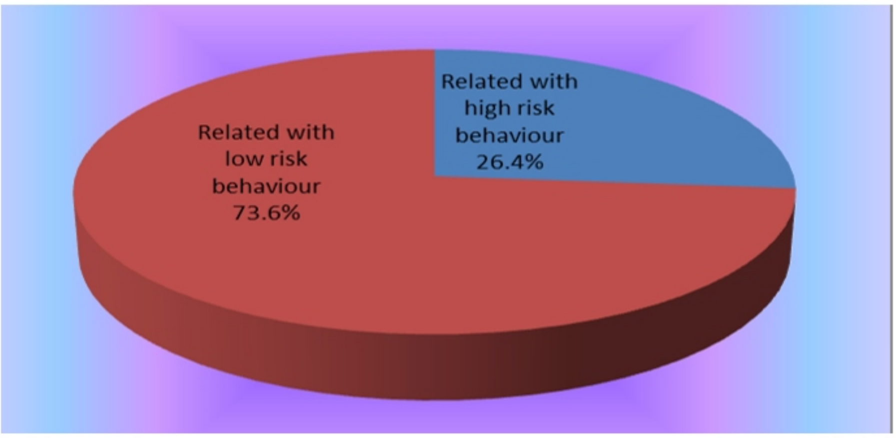
75.5% (N-83) males were late detected; 67% (N-73) were married. In the urban population, 64% (N-70) were detected late as compared to the rural population. Mostly, less literate people were late detected, i.e., about 70% (N-79) were illiterate or had only primary level education. (Figure II)

Figure-II: Distribution of Study Population by Education



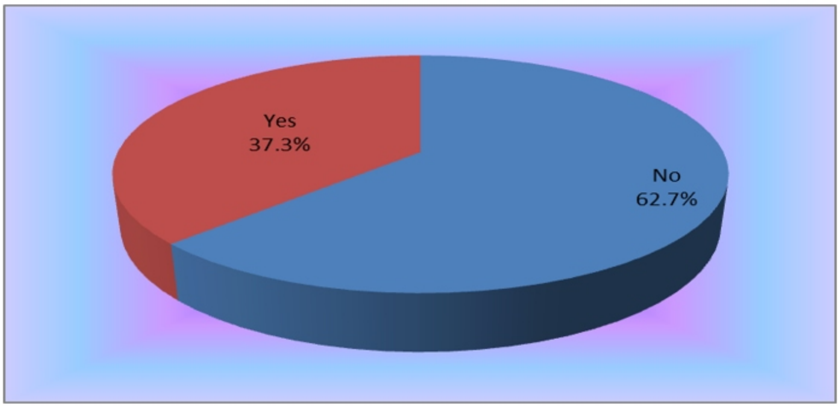
74% (N-81) of the population with low-risk behaviour, such as teachers, shopkeepers, government employees. were late detected compared to people who showed high-risk behaviour, such as trucker, drivers, labourers. (Figure III)

Figure-III: Distribution of Study Population by Risk Behaviours



64% (N-71) people who lived with their family were late detected compared to those who lived alone were 18% (N-20). 63% (N-69) people showed that they did not have any awareness/knowledge about HIV/AIDS. (Figure IV)

Figure-IV: Distribution of Study Population by Awareness/Knowledge about HIV/AIDS



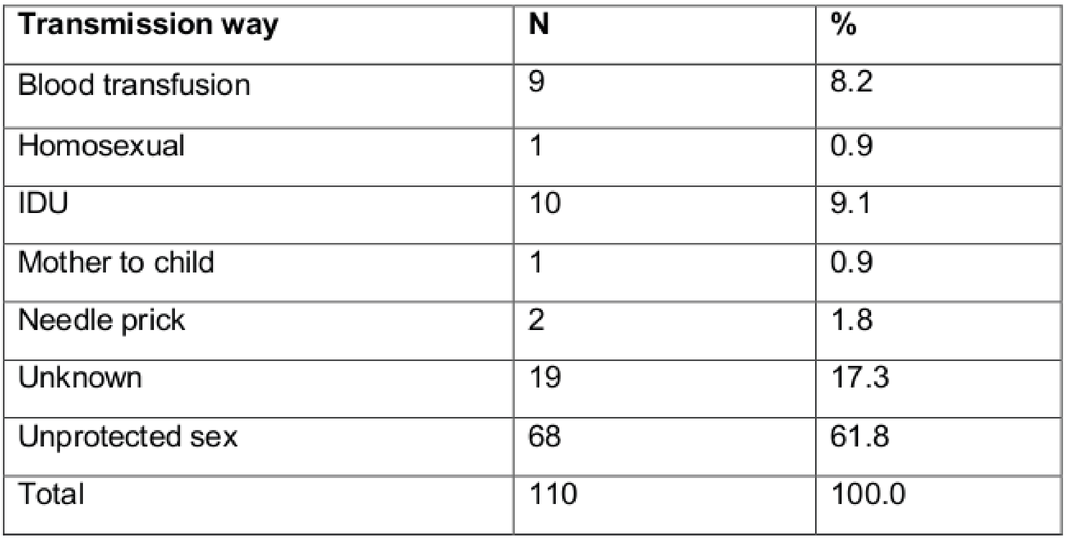
Out of 110 subjects, 25 (22.7%) came for testing because of a risk exposure, 11 (10.0%) subjects came for a screening test, and 74 (67.3%) subjects came for testing after symptoms appeared. (Table II)

Table-2: Reasons for HIV Testing among the Study Population

Reason for HIV testing	**N**	**%**
Risk exposure	25	22.7
Screening	11	10.0
Symptoms	74	67.3
Total	110	100.0

It was found that at the time of testing, about 95% (N-105) people had comorbidities, out of which 42% had tuberculosis (TB). In this study we found that unprotected sex (61.8%) was the most common way of transmission. (Table III)

Table-3: Distribution of Study Population by Reported Modes of Transmission



Transmission way	N	%
Blood transfusion	9	8.2
Homosexual	1	0.9
IDU	10	9.1
Mother to child	1	0.9
Needle prick	2	1.8
Unknown	19	17.3
Unprotected sex	68	61.8
Total	110	100.0

Other ways of transmission were blood transfusion (8.2%), homosexual contact (0.9%), injecting drug users (IDU) (9.1%), mother to child transfer (0.9%), and unknown (17.3%). Most patients who came late for HIV testing were able to easily have access to a HIV diagnosis (n=81) (73.6%)

CONCLUSIONS

The present study was done to identify factors associated with late diagnosis of HIV infection and to assess the impact of delayed diagnosis of HIV among the general population. Finally, after reviewing all the parameters and factors, we reached the conclusions that low education levels, being tested for the presence of symptoms/illness, and acquiring HIV through unprotected sex were major factors associated with late HIV diagnoses. Therefore, it is essential to increase awareness about HIV and ensure enhancing of the education levels of people about HIV and AIDS. In this way, people would become aware about the consequences of late HIV testing and this will encourage early HIV testing.

RECOMMENDATIONS

All the patients who come to a health care facility must be tested for HIV. Self-initiation for HIV testing should be encouraged to promote early diagnosis as it was found a protective factor against a late diagnosis. It is necessary to make planning and policies that will enhance self-initiation for HIV testing by people. We also recommend mass screening for HIV and expanding counselling centres for high-risk groups. As we discussed here, low education levels play a negative role, usually leading to late HIV diagnose. Therefore, better planning to enhance the level of education of the public to increase awareness and minimize internalized stigma and encouraging people for early HIV testing are highly recommended. There is also a need to strengthen and extend the available testing and counselling activities to the primary health care level.

ACKNOWLEDGEMENTS

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Prevalence and Factors Attributed to Loss to Follow-up (LTFU) among People Living with HIV (PLHIV) Attending Anti-retroviral Therapy (ART) Centres in Tripura, North-East India: A Mixed-method Retrospective Cohort Study

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INTRODUCTION

Recently, there has been an increasing the number of ART centres across the country. In spite of these facilities, a significant number of 'Loss to follow-up (LTFU (' cases were recorded. These LTFU patients from ART centres are vulnerable to opportunistic infections and complications, leading to poor treatment outcomes. Therefore, in resource-limited settings like India, LTFU hinders the effectiveness and proper implementation of ART programmes as it leads to disruption of treatment, ART drug failure and mortality. Therefore, understanding the risk factors associated with LTFU and implementing the necessary interventions will be helpful towards achieving the goal to end HIV/AIDS by 2030.

Therefore, this study is aimed at estimating the prevalence of LTFU cases among PLHIV (18 years and above) registered at selected ART centres of Tripura and to ascertain the attributing factors of LTFU among PLHIV registered at these ART centres.

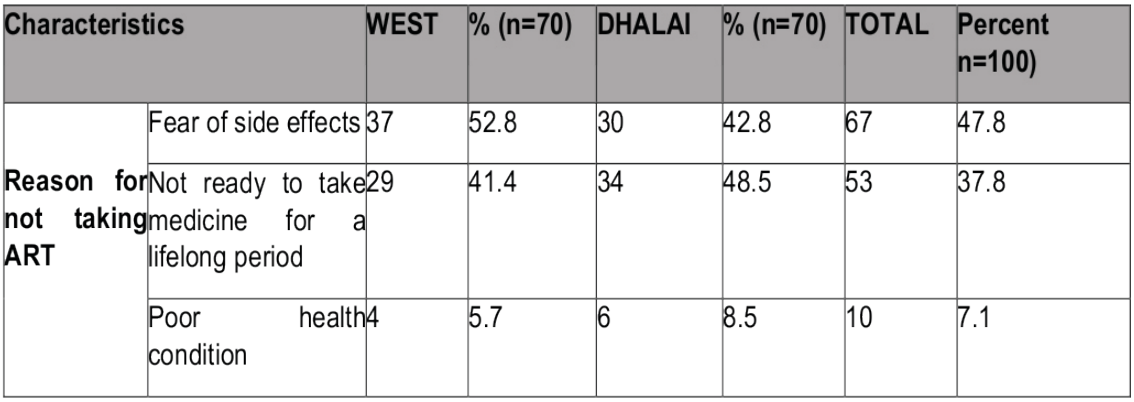
METHODS

A total of HIV-infected individuals or PLHIVs, aged 18 years and above, who were registered for HIV/AIDS or attending ART centres in the west and Dhalai district of Tripura with at least one clinic visit in the last three years (from October 2018 to October 2021) were included in the study and assessed for their LTFU status. Data was collected retrospectively from adult pre-ART and ART patients' data records who were classified as LTFU from ART centres during the last three years and the non-probability convenience sampling technique was used for interviews of the target population. Then, these selected PLHIVs were called for interviews. The study duration was three months.

FINDINGS

It was found that almost half (47.8%, n=140) of the LFTU cases don't take medications regularly because of their fear of side effects, 37.8 %(n=53) were not ready to take lifelong ART therapy and 7.1% (n=140) couldn't take medications due to poor health conditions. In the west district, 52.8% LFTUs were not taking medicines because of the fear of side effects whereas 48.5% of LFTUs in Dhalai district were not taking medications because they were not ready to commit themselves to lifelong medication. (Table 1).

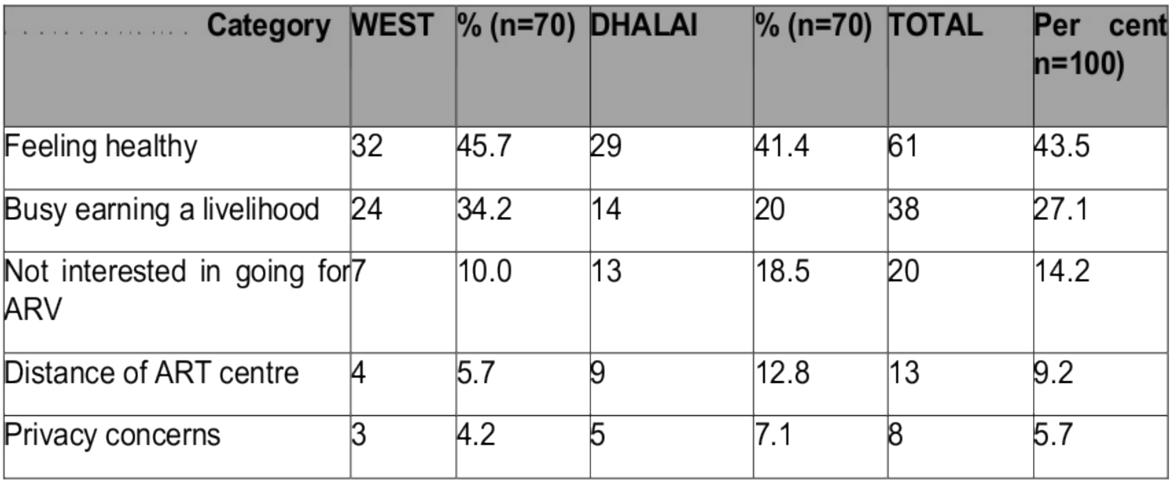
Table 1: Reason for not taking ART Drugs



Characteristics		WEST	% (n=70)	DHALAI	% (n=70)	TOTAL	Percent n=100)
Reason for not taking ART	Fear of side effects	37	52.8	30	42.8	67	47.8
	Not ready to take medicine for a lifelong period	29	41.4	34	48.5	53	37.8
	Poor health condition	4	5.7	6	8.5	10	7.1

The most common reason for PLHIV individuals not attending ART centres is a feeling of healthiness, accounting for around ~40% in both the districts (n=70). The other common reasons were being busy earning a livelihood (27.1%, n=140) and lack of interest in taking ART drugs (14.2%, n=140). The proportion of subjects who were not interested in taking ARV drugs was more common in Dhalai district (18.5%, n=70) than West district (10%, n=70). (Table 2).

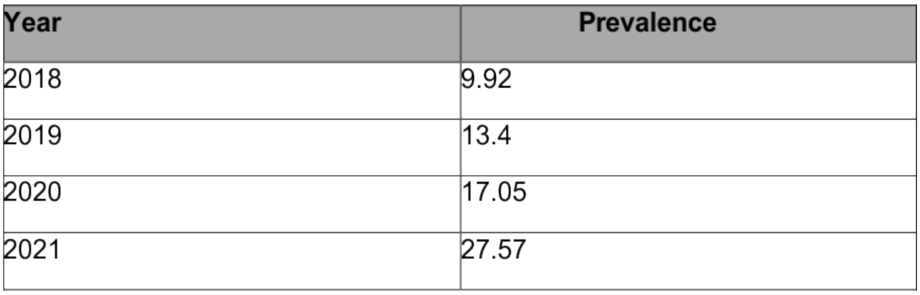
Table 2: Reasons for not going to ART centres



Category	WEST	% (n=70)	DHALAI	% (n=70)	TOTAL	Per cent n=100)
Feeling healthy	32	45.7	29	41.4	61	43.5
Busy earning a livelihood	24	34.2	14	20	38	27.1
Not interested in going for ARV	7	10.0	13	18.5	20	14.2
Distance of ART centre	4	5.7	9	12.8	13	9.2
Privacy concerns	3	4.2	5	7.1	8	5.7

The prevalence of LFTU cases was higher in 2020–21 (9.92% and 13.4%) in comparison to year 2018–19 (17.05% &27.57%). The highest prevalence was in the year of 2021(27.57%). (Table 3)

Table 3: Year-wise prevalence of LFTU cases in Tripura



Year	Prevalence
2018	9.92
2019	13.4
2020	17.05
2021	27.57

CONCLUSIONS

The majority of LFTU cases were seen in the age group of 18–30 years (86.4%) with their education up to the primary level, were residing in rural areas, and most belonging to the schedule tribe community (77.9%,). Prevalence of LFTU cases were more during 2020–2021(COVID-era, 17.05% &27.57%) in comparison to 2018–2019 (pre-COVID era, 9.92% and 13.4%), which might be attributed by the Covid-19 epidemic. The main reasons for not some subjects of the study not coming to ART centres was that they felt reasonably healthy (43.5%). Most of them were not taking ART regularly because of a fear of side effects (47.8%), and not accepting the need for lifelong continuation of ART drugs (37.8%).

RECOMMENDATIONS

Further large-scale studies including all districts to ascertain the prevalence and its' associated risk factors among PLHIVs may be done as cultural and geographical variations exist in different districts. Reducing the need for frequent visits by providing ART drugs for three months instead of one month as practised at present will be helpful. Also, counselling could be focused on ART intake and its long-term benefits, side effects, and the need for long-term continuation. Taking measures for more access to ART therapy centres could be achieved by disseminating of centres, especially in hilly areas; travel concessions may be given for public transport like buses and trains by providing specific ID cards; providing incentives like the DOTs programme to PLHIV patients, and its 'associated health workers, which will encourage and motivate LFTU individuals as health care providers trace the LFTU cases to help them.

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Mortality and Causes of Death among People Diagnosed with HIV: A Retrospective Analysis of Hospital-based Records

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INTRODUCTION

HIV continues to be a major global public health issue, having claimed 36.3 million (27.2–47.8 million) lives so far till 2020[1]. The first cases of HIV infection in India were detected in 1986[2] among female sex workers in Chennai and currently, India has the third largest HIV epidemic in the world, with 2.3 million people living with HIV [3]. Compared to 2010, India has made good progress in 2020 in reduction of 66% deaths among people living with HIV [4].

AIDS continues to account for the majority of deaths in HIV-positive people, and mortality remains higher in HIV-positive people than in the general population. These findings highlight the importance of prompt diagnosis, care engagement, and optimum management of comorbidities in reducing mortality of people with HIV. More importantly, studies are limited in India, especially Uttar Pradesh, to examine the factors associated with selected causes of death. So, this study is highlighting the cause of deaths among the PLHIV and documenting the important determinants of such deaths, which will help us to prevent early deaths in the PLHIV, thereby helping to prolong the life of the PLHIV.

OBJECTIVES

To document the causes of death and related characteristics among HIV-infected individuals' treatment at the ART centres.

To assess the socio-demographic profile of people living with the human immunodeficiency virus on antiretroviral therapy at the ART centres.

METHODS

Study Area: ART centres of three districts – Gorakhpur, Deoria, and Kushinagar.

Study Design: Facility-based retrospective study.

Study Participants: Records of HIV patients registered in ART centres.

Sample Size: No specific sample size was calculated for the study. Five-year records of all HIV-positive patients who were enrolled in ART centres between 2016 and 2020.

Inclusion Criteria: All records of HIV-positive patients who were enrolled in ART centres between 2016 and 2020, but died.

The causes of deaths, individually confirmed by the medical officers or nodal officers of the ART centres following the reporting of deaths, was taken. The patient information was also collected from records of ART centres and all the data was entered electronically by trained staff. The causes of death were classified by using the recent International Classification of Diseases.

Ethical permission was taken from the concerned authorities before starting the study. Data was entered on standardized formats by project staffs. The data set was identical. The data captured from records was entered in a computer-generated Excel sheet. Descriptive analysis and statistical tests were used in accordance with the study's requirement.

FINDINGS

Reported causes of death were coded as per the guidelines of the International Classification of Diseases (ICD-11) to determine the deaths according to standard definitions. Among 8851 HIV- infected patients registered over a period of five years, 1831 (21%) deaths have occurred. But only 476 (26%) causes of death have been reported, out of 1831 deaths.

72% mortality among male patients. 88% patients were from rural areas. Almost three-fourth (73%) deaths occurred in the 15–49 age group and the least deaths occurred in under 15 age group. 70% patients are heterosexual in nature. (Fig 1-3)

Fig 1- Demographic distribution Patients Typology

Fig 2- Age wise distribution

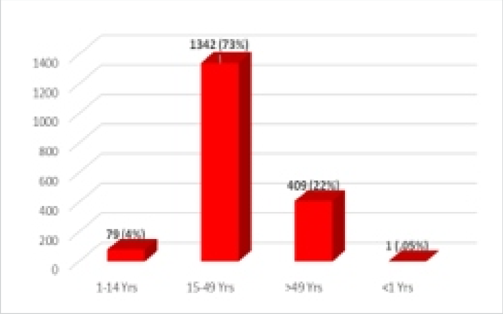
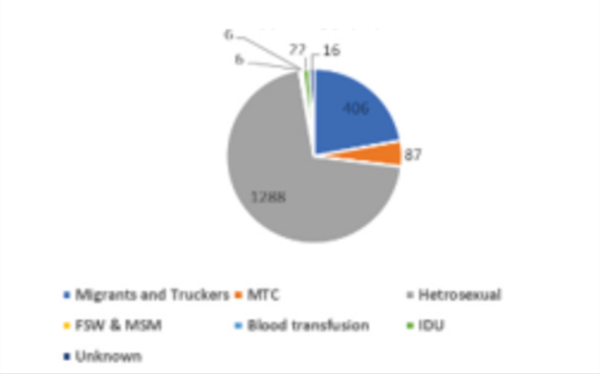
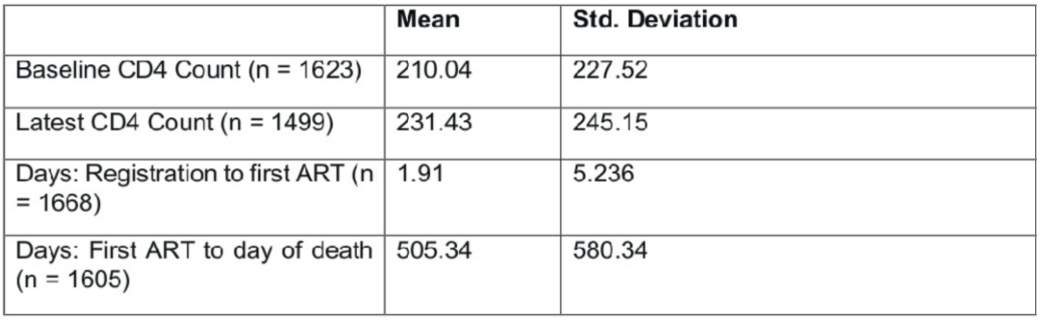


Fig 3- Percent Typology of the participants



Mean CD4 count at baseline was 210 which was increased to 231 after treatment. Mean days for initiation of treatment after registration was 1.91 days and mean days for First ART to day of death was 505 days. (Table-1)

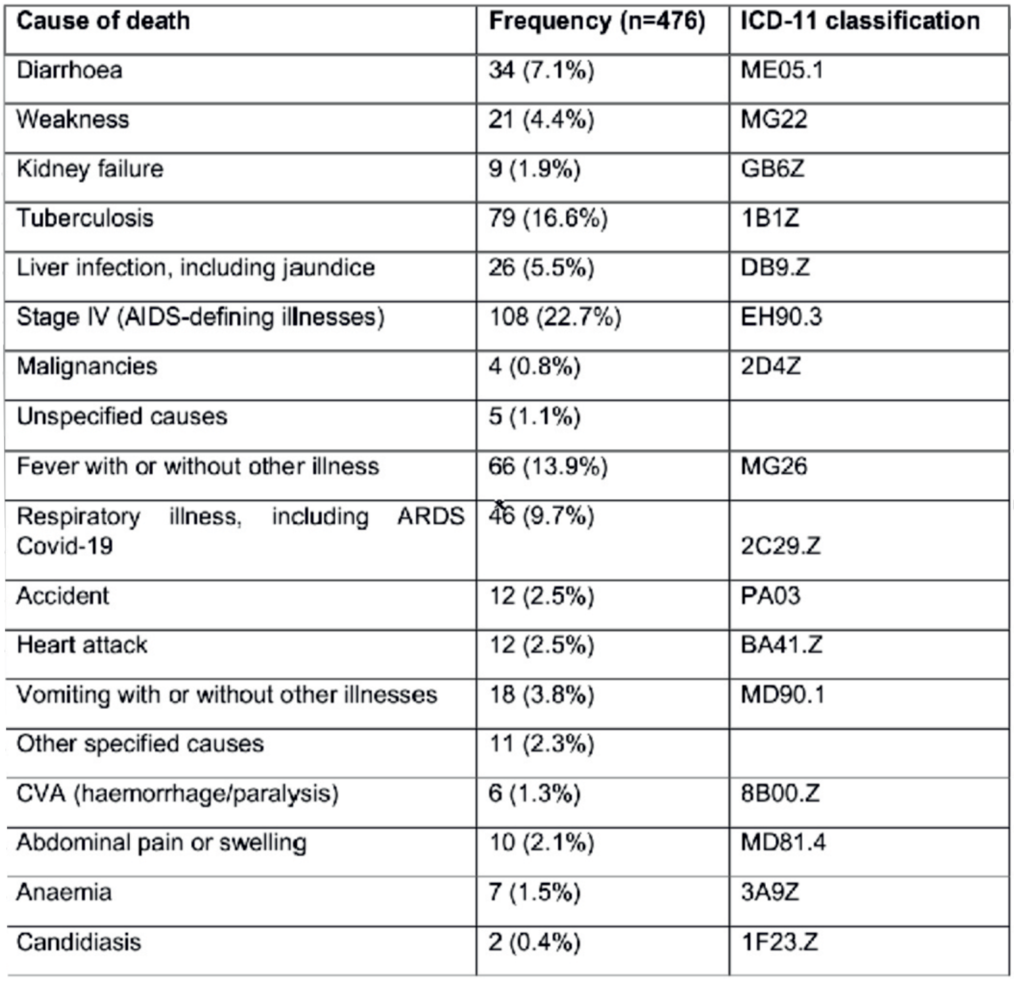
Table 1 Mean CD4 Count and Mean Days of ART Initiation and Days alive



	Mean	Std. Deviation
Baseline CD4 Count (n = 1623)	210.04	227.52
Latest CD4 Count (n = 1499)	231.43	245.15
Days: Registration to first ART (n = 1668)	1.91	5.236
Days: First ART to day of death (n = 1605)	505.34	580.34

Stage IV (AIDS-defining illnesses) (23%) was the leading cause of death followed by death due to tuberculosis (17%), fever-related infections (14% each). (Table 2)

Table 2 Cause of death among HIV patients



Cause of death	Frequency (n=476)	ICD-11 classification
Diarrhoea	34 (7.1%)	ME05.1
Weakness	21 (4.4%)	MG22
Kidney failure	9 (1.9%)	GB6Z
Tuberculosis	79 (16.6%)	1B1Z
Liver infection, including jaundice	26 (5.5%)	DB9.Z
Stage IV (AIDS-defining illnesses)	108 (22.7%)	EH90.3
Malignancies	4 (0.8%)	2D4Z
Unspecified causes	5 (1.1%)	
Fever with or without other illness	66 (13.9%)	MG26
Respiratory illness, including ARDS Covid-19	46 (9.7%)	2C29.Z
Accident	12 (2.5%)	PA03
Heart attack	12 (2.5%)	BA41.Z
Vomiting with or without other illnesses	18 (3.8%)	MD90.1
Other specified causes	11 (2.3%)	
CVA (haemorrhage/paralysis)	6 (1.3%)	8B00.Z
Abdominal pain or swelling	10 (2.1%)	MD81.4
Anaemia	7 (1.5%)	3A9Z
Candidiasis	2 (0.4%)	1F23.Z

CONCLUSIONS

In conclusions, our study shows 21% deaths among people living with HIV in the last five-year records, 72% mortality among male patients, and 88% patients were from rural areas. Since these three districts have a larger rural population (approximately 80%) compared to urban areas, this may be the reason for more cases in rural areas. Almost three-fourth (73%) deaths occurred in the 15–49 age group. The mean CD4 count at the baseline was 210, which was increased to 231 after treatment. AIDS-related illnesses (22.7%) continue to be the leading causes of deaths among HIV patients and tuberculosis (16.6%) is the second leading cause of death. Persisting fever (13.9%) and diarrhoea (7.1%) are other causes of death. So, mortality remains higher in HIV-positive people despite the availability of free diagnosis and treatment. The status of various causes of death will help in optimum management of comorbidities in reducing mortality in people with HIV.

RECOMMENDATIONS

Only 476 (26%) causes of death have been recorded out of 1831 deaths. Therefore, the study stressed on the fact that there was a need for further research into other causes of death, i.e., death due to any unknown status. Tuberculosis was the second leading cause of death (16.6%) among the HIV patients on ART. Therefore, strengthening the linkages and referral between the HIV and TB programmes will be crucial to reduce the burden. In addition to that, this study strongly recommends further research and advocacy to ensure that disease-specific interventions are appropriately addressed in HIV programmes and policies.

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Mental Health Issues among PLHIV

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INTRODUCTION

The human immunodeficiency virus/acquired immune deficiency syndrome (HIV/AIDS) is one of the best-known deadly diseases in the world, due to its devastating impact on communities, families, children, and development.

MENTAL HEALTH

According to WHO, mental health or psychological well-being is an integral part of an individual's capacity to lead a fulfilling life, including the ability to form and maintain a relationship, to study, work, or pursue leisure interests, and to make day-to-day decisions about education, employment, housing, or other choices. Mental health is a state of well-being in which every individual realizes his or her potential, can cope with the normal stresses of life, can work productively and fruitfully, and can contribute to her or his community (WHO, 2018).

QUALITY OF LIFE

The WHO has defined quality of life (QOL) as the 'individuals' perceptions of their position in life in the context of the culture and the value systems in which they live and in relation to their goals, expectations, standards and concerns'. As a result, WHO has formulated a questionnaire addressing issues pertaining to the quality of life in a questionnaire of 31 items with six domains specific for PLHIV. These domains include Physical, Psychological, Level of Independence, Social Relationships, Environment, and Spirituality/Religion/Personal Beliefs (WHOQOLHIV BREF).

RATIONALE

Mental health complexities like anxiety, stress, and depression have the ability to throw a gauntlet to the effectiveness of HIV prevention interventions. The concern has called for more and more extensive research to occur on HIV and mental health as there are various areas of intersection. Not only do the physical malaises, but also the mental inconsistencies, require immediate attention as these victims perpetually experience negative feelings like anxiety, high emotional and psychological distress, hopelessness, loneliness, frustration, depression, suicidality, and post-traumatic stress.

OBJECTIVES

The objectives of study are as follows:

To assess mental health problems (anxiety, depression, stress), quality of life, death anxiety among people living with HIV/AIDS.

To assess gender differences in mental health problems (anxiety, depression, stress), quality of life, death anxiety among people living with HIV/AIDS.

To investigate the relationship between mental health problems (anxiety, depression, stress) and death anxiety with the quality of life.

METHODS

Anxiety, Depression, and Stress Scale (ADDS; Bhatnagar et al., 2018): It is used to assess mental health problems. Reliability of the total scale in terms of internal consistency is as measured by Cronbach's Alpha and the Spearman–Brown coefficient is 0.81 and 0.89.

Thakur Death Anxiety Scale (Thakur & Thakur, 1985): The test consists of 16 discriminating statements. There is a five-point Likert Scale for scoring of each item. Internal consistency and test-retest reliability of the scale are 0.78 and 0.86, respectively (Thakur & Thakur, 1985).

WHOQOL HIV BREF (World Health Organization): The scale consists of six domains: physical health (four items), psychological well-being (five items), social relationship (four items), environmental health (eight items), level of independence (four items), and spiritual health (four items).

STUDY DESIGN

The correlational study was conducted in an ART centre, IMS, BHU, Varanasi, Uttar Pradesh, India. The purposive sampling was employed to select the study subjects. Around 100 people living with HIV/AIDS were considered for the study from the Department of Microbiology, the ICTC centre and ART centre of the Institute of Medical Sciences, Banaras Hindu University, Varanasi.

FINDINGS

Mental health of PLHIV was assessed by the Anxiety, Depression, and Stress Scale. The mean score of anxiety was 3.99, which indicates an average level of anxiety in the participants, an average level of depression with a mean score of 3.86 and below, an average level of stress which is observed from the mean score of 4.29. Thus, hypothesis 1(a) is rejected on the basis of this observation.

The mean score on death anxiety was 33.71, which shows a low level of death anxiety. Thus, hypothesis 1(b) is rejected on the basis of this observation.

The mean score on QOL was 123.83, which shows a high level of QOL. Thus, hypothesis 1(c) is rejected on the basis of this observation.

Non-significant gender difference was found in anxiety. The mean value depicts that HIV-infected women reported slightly higher on anxiety than men with HIV but these results were not statistically significant. Thus, hypothesis 2 (a) is rejected on the basis of this observation.

Significant gender difference was found in depression. The mean value depicts that depression of women with HIV/AIDS was higher than HIV/AIDS men. Thus, hypothesis 2 (b) is accepted on the basis of this observation.

Further, significant gender difference was also found in PLHIV on stress. The mean value depicts that stress of women with HIV/AIDS was higher than HIV/AIDS men. Thus, hypothesis 2 (c) is accepted on the basis of this observation

Results indicated significant gender difference in the QOL. The mean value depicts that the QOL of men was higher than women. Thus, hypothesis 2 (d) is accepted on the basis of this observation.

Significant gender difference was found in PLHIV on death anxiety. The mean value depicts that death anxiety of women with HIV/AIDS was higher than HIV/AIDS men. Thus, hypothesis 2 (e) is accepted on the basis of this observation.

Significant negative correlation was found between anxiety and QOL among PLHIV, which means the higher the anxiety is, the lower is the QOL. Thus, hypothesis 3 (a) is accepted on the basis of this observation.

Significant negative correlation was found between depression and the QOL among PLHIV. Thus, hypothesis 3 (b) is accepted on the basis of this observation.

Significant negative correlation was found between stress and the QOL among PLHIV. Thus, hypothesis 3 (c) is accepted on the basis of this observation.

Significant negative correlation was found between death anxiety and the QOL among PLHIV. Thus, hypothesis 3 (d) is accepted on the basis of this observation.

The regression analysis showed that depression having the beta value -0.42 ($p < 0.05$) was significantly predicting the QOL of PLHIV. Furthermore, death anxiety with the beta value -0.22 ($p < 0.05$) was significantly predicting the QOL of PLHIV.

CONCLUSIONS

The present study affirmed that participants in the study (PLHIV) reported moderate mental health problems (anxiety, depression, and stress), low levels of death anxiety, and a high quality of life. Women experienced higher levels of stress, depression, death anxiety, and a low quality of life as compared to their counterparts. Non- significant difference was observed in the anxiety levels of males and females. Mental health problems (anxiety, depression, and stress), and death anxiety were significantly negatively associated with the quality of life. Death anxiety and depression were found to be significant predictors of the quality of life among PLHIV.

RECOMMENDATIONS

On the basis of these findings, it may be concluded that PLHIV face mental health problems (anxiety, depression, and stress), so the importance of mental health interventions/programmes must not be undermined. Psychological interventions as well as individual and family counselling should be prioritized for PLHIV. Effective interventions should operate on several levels and interventions could be directed towards improving a person's sense of acceptance and self-worth as well as their ability to cope in adaptive ways.

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Study on Knowledge, Acceptability, and Preferences for Safer Conception Methods among Couples on Antiretroviral Therapy (ART) in West Bengal: A Qualitative Study

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INTRODUCTION

Antiretroviral therapy (ART) has decreased mortality and morbidity due to HIV/AIDS [1-6] which encouraged people living with HIV (PLHIV) to have the desire to conceive, both among men and women. Safer conception interventions that minimize the risk of horizontal and vertical HIV transmission include condomless intercourse during ovulation only [7], intravaginal or intrauterine insemination for women, which may include sperm washing if the male partner is HIV-infected [8, 9], ART for HIV-infected partners [10–12], pre-exposure prophylaxis (PrEP) for HIV-uninfected partners [13], and voluntary medical male circumcision for HIV-uninfected men (VMMC) [14]. The current study aims to address the gaps regarding knowledge and attitude about these safer conception strategies (SCS) so that proper behaviour changes communication (BCC) can be developed and implemented to ensure safer conception practices.

The objectives of the study are to find out attitudes towards safe childbearing and rearing practices among the PLHIV. Secondly, to assess the perception of PLHIV beneficiaries and counsellors of ART centres regarding safe conception practices and finally, to elicit to acceptability, feasibility, and preferences for different methods of safe conception practices among PLHIV.

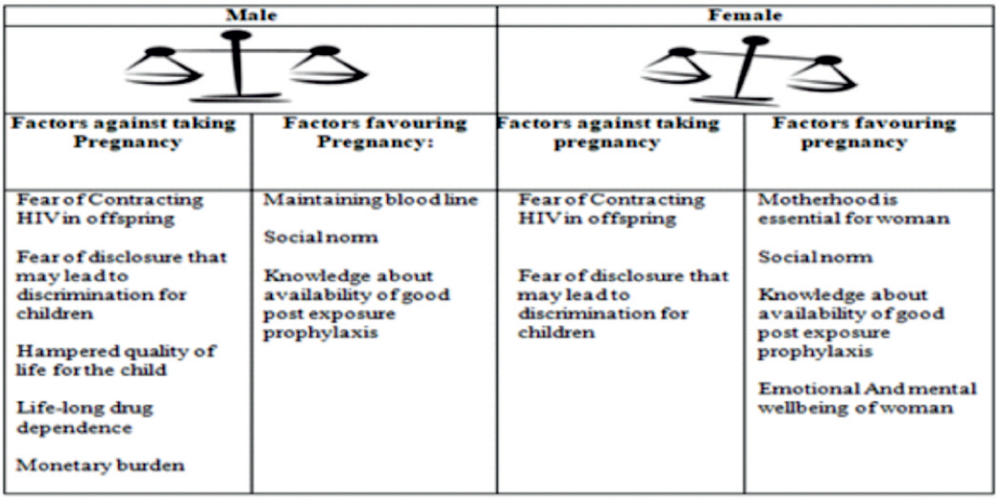
METHODS

A descriptive observational study with a cross-sectional design and a qualitative method of data collection was created for the period of 12 months (April, 2022–April, 2023) at ART centres of seven different districts of West Bengal. ART counsellors and PLHIV eligible couples were interviewed in-depth (for ART counsellors) or Focus Group Discussions (for PLHIV couples) methods were used. Districts were chosen by the maximum variant sampling method where districts with different geographical and socio-cultural characteristics were chosen. 80 PLHIV male and 81 females were interviewed. Sevens in-depth interview were conducted among ART counsellors. From the north zone hilly areas of Darjeeling district and the plains of Cooch Behar district were selected. From the central zone, Murshidabad district was selected as it shares a large border area with Bangladesh. From the west zone, Bankura and Bardhhaman districts were selected due to the presence of tribal and industrial areas respectively. Finally, from the south zone, Kolkata Metropolitan district and South 24 Parganas were selected. Thematic analysis based on the grounded theory approach was conducted using NVivo v 12 (QSR International, Melbourne, Australia).

FINDINGS

In the first theme, views about childbearing and rearing were enquired from the PLHIV couples, the interim result of which is summarized in Figure 1.

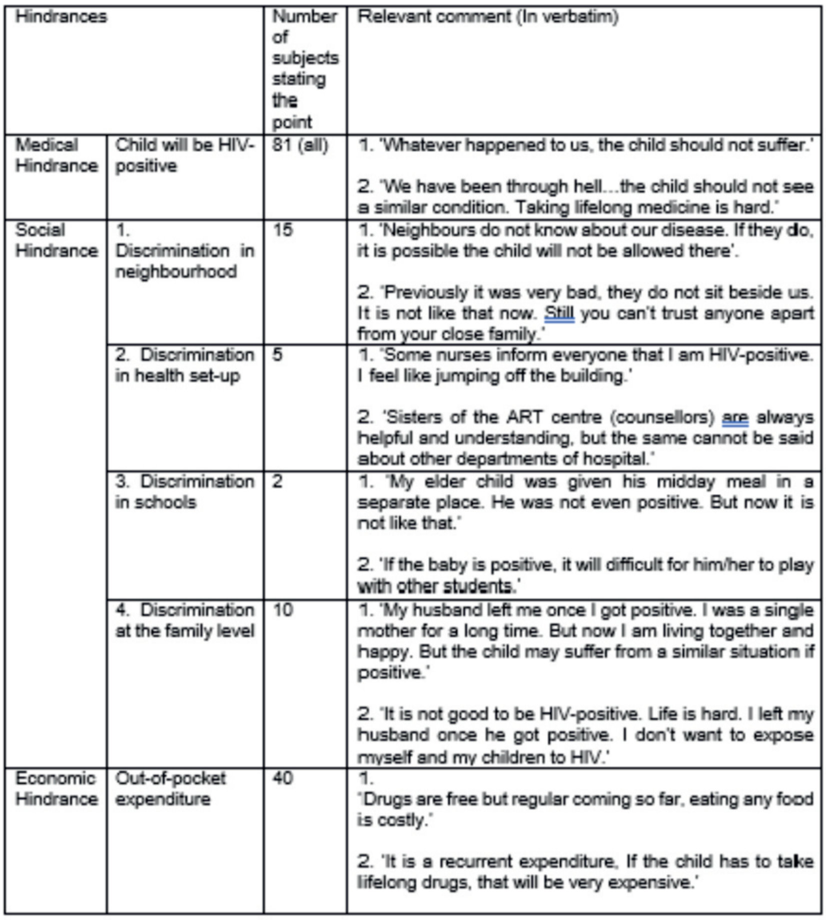
Figure 1: Metaphorical Physical Diagram Showing Factors Determining Pregnancy Decisions among the Couples on Antiretroviral Treatment for HIV



Male		Female	
Factors against taking Pregnancy	Factors favouring Pregnancy:	Factors against taking pregnancy	Factors favouring pregnancy
Fear of Contracting HIV in offspring Fear of disclosure that may lead to discrimination for children Hampered quality of life for the child Life-long drug dependence Monetary burden	Maintaining blood line Social norm Knowledge about availability of good post exposure prophylaxis	Fear of Contracting HIV in offspring Fear of disclosure that may lead to discrimination for children	Motherhood is essential for woman Social norm Knowledge about availability of good post exposure prophylaxis Emotional And mental wellbeing of woman

Regarding the second theme, which is about probable hindrances and related verbatim are summarized in the table below. (Table 1)

Table-1: Findings from Qualitative component



Hindrances		Number of subjects stating the point	Relevant comment (In verbatim)
Medical Hindrance	Child will be HIV-positive	81 (all)	1. ‘Whatever happened to us, the child should not suffer.’ 2. ‘We have been through hell…the child should not see a similar condition. Taking lifelong medicine is hard.’
Social Hindrance	1. Discrimination in neighbourhood	15	1. ‘Neighbours do not know about our disease. If they do, it is possible the child will not be allowed there’. 2. ‘Previously it was very bad, they do not sit beside us. It is not like that now. Still you can’t trust anyone apart from your close family.’
	2. Discrimination in health set-up	5	1. ‘Some nurses inform everyone that I am HIV-positive. I feel like jumping off the building.’ 2. ‘Sisters of the ART centre (counsellors) are always helpful and understanding, but the same cannot be said about other departments of hospital.’
	3. Discrimination in schools	2	1. ‘My elder child was given his midday meal in a separate place. He was not even positive. But now it is not like that.’ 2. ‘If the baby is positive, it will difficult for him/her to play with other students.’
	4. Discrimination at the family level	10	1. ‘My husband left me once I got positive. I was a single mother for a long time. But now I am living together and happy. But the child may suffer from a similar situation if positive.’ 2. ‘It is not good to be HIV-positive. Life is hard. I left my husband once he got positive. I don’t want to expose myself and my children to HIV.’
Economic Hindrance	Out-of-pocket expenditure	40	1. ‘Drugs are free but regular coming so far, eating any food is costly.’ 2. ‘It is a recurrent expenditure, If the child has to take lifelong drugs, that will be very expensive.’

Regarding ways of reduction of the HIV transmission risk in the time of conception, almost all the participants replied that a couple should strictly follow the advice of their doctor. Through the discussion, when the participants came to know about the semen washing method, they got interested and many agreed that if anonymously and cautiously done, that method may be the method of choice for the majority and should be widely accepted. In Darjeeling district, some were sceptical about the procedure, expressing concern about whether there was a chance that the semen may be changed during the procedure.

The factors for accepting different methods among PLHIV couples were found to be 'effectiveness to prevent HIV in offspring', 'cost of treatment', 'confidentiality', and 'regular availability of safe conception methods. According to the ART counsellors, 'confidentiality', 'eagerness to conceive', and 'family and community perception regarding conception methods' play vital roles in selecting the method.

Finally, preference for a method was found to be 'semen washing'. PEP is found to be the second most preferred as it already exists in the health system. As semen cleansing is not effective for the scenario when the mother is HIV-positive, PEP still has a big role even if semen cleansing is initiated. A regular supply and distribution of PEP with adequate preconception counselling is of utmost importance for a healthy future generation.

CONCLUSIONS

Any discussions regarding conception are approached with caution after thorough testing of the viral load. Preconception and post conception testing as well as compliance to ART and PEP is universally discussed, but safe period methods, though known, are not a very common theme of discussion. Sperm washing is not at all discussed and beneficiaries' as well as ART counsellors' knowledge about this is also poor.

RECOMMENDATIONS

The discussions with the PLHIV couples showed that acceptance of sperm washing will be good, if introduced in a government set-up. Until that materializes, more encouragement should be provided for safe conception practices through behaviour change communication (BCC) for the use of PEP. Having a child should not be discouraged to combat the still persistent stigma against this population and different perceived hindrances for childbearing and rearing should also be addressed through BCC.

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Factors for Poor Uptake of Antiretroviral Therapy among Female Sex Workers, and People with Intravenous Drug Use on Opioid Substitution Therapy: A Mixed-Method Study

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INTRODUCTION

Bio-behavioural surveys confirm that HIV prevalence is high or 'concentrated' among 'key populations' (KPs) who have unprotected sexual contacts with multiple partners or who engage in injecting drug use. These populations include female sex workers (FSW), men who have sex with men (MSM), hijra/transgender (TG), people who inject drugs (PWID), long-distance truck drivers and migrants. Other than the stigma of being HIV-positive, there is an additional factor present among these group of people hindering their uptake of antiretroviral therapy (ART). High-risk groups due to various reasons, known and unknown, do not avail the services provided in the ART centre in its entirety.

This study aims to quantify the known factors and identify any of the unknown factors along with finding out the bottleneck of service provision. Thereby improvement of the situation may be the benefit obtained from the study.

METHODS

A mixed methodology was used, comprising case-control study as a quantitative measure and focus group discussions and in-depth interviews with key persons as qualitative measures. The cases being HRG (female sex workers and Intravenous drug users on ART) and age, sex matched controls on ART were recruited. Qualitative components included two FGDs among HRGs and in-depth interviews of key informants of each HRG.

The quantitative arm involved analysis of groups on ART practising high-risk behaviour for a period of one year. High-risk behaviour consisted of exposure involved in commercial sex work and those exposed to intravenous drug usage. The comparator arm was sex matched controls who were sero-positive and on ART but did not practise high-risk behaviour for a period of one year. The qualitative arm consisted of development of a grounded theory based on thematic analysis from coded transcripts.

Calculated sample size for quantitative arm: Considering non-adherence to be 16.87% among no-risk groups or comparator arms and 50% among FSW 4sample sizes calculated to be 24 (with exposed to unexposed ratio of 1:2), considering 95% CI (alpha error 0.05), 80% power (beta error 20%). Data from 24 high-risk groups on ART and of 48 no- HRG on ART as comparators was taken.

For the qualitative component: Two FGDs were conducted among female sex workers in the age group ranging from 23–54 and 27 – 51, constituting 11 in the first group and eight in the second group.

Information was transcribed and recorded after consent. The third FGD was conducted among IDU on ART presently attending opioid substitution clinics, in the age group ranging from 22 to72 years, with total participants being 13.

In-depth interviews were conducted for four candidates who were peer educators for IDU males aged 59, project manager for the NACO-sponsored organization for FSWs aged 58 and male, counsellor for the IDU population, male aged 42 and the gate-keeper of the community for FSW aged 37, female. All the interviews were transcribed by independent transcribers and was scripted for analysis. Each of the procedures was continued till there was data saturation.

FINDINGS

The case comprised 13 females (12 FSW, one IDU) in the age group ranging from 23 to 54 and 11 males, all IDU, ranging from 21 to 53 years. On analysis of the quantitative arm, it was seen that there was a significant difference in 95% adherence rate among HRG versus non-HRG on ART (P= 0.0093) with HRG being less adherent. Investigating factors for such showed that the odds of an HRG member having an education of less than five years was 3.06 (CI 1.03-9.07). Living at home with social and familial support also indicated that this was beneficial to the HRG sector, with an odd of 0.054 (CI0.01-0.278). The odds of an HRG having to lose daily wages in order to collect medication was as high as 5.846 (CI1.53-22.28). This was coupled with 13 times more chance of the subject waiting for a prolonged time at the centre for medication collection as compared to the time taken for a non-HRG. This indicates a differential pattern of behaviour, segregating the HRG and possibly addressing them at the end of the session though this was not reflected in other direct questions on misbehaviour meted out specially to an HRG group. The factor of frequency of drug collection between monthly to a wider window period had a OR 0.196 CI (0.057-0.672), indicating cases preferring a wider time frequency than monthly. Interestingly, the chances of an HRG to procure medication from a centre away from the regular centre while out of station was 7.09, indicating decentralization at the point of the medication recipient rather than service provision to be of use if initiated.

Other factors were investigated but did not show a significant dissimilarity among the two arms and the odds of residence (rural/urban) or monthly income did not have a significant impact. Factors like the time taken to travel and expenditure incurred showed OR of 1.79 C (I0.66-4.8) and OR 2.38 CI (0.85- 6.64), both not being of much relevance with cases showing no differential pattern on these grounds. Regularity of supply of ART as a factor affecting poor compliance as stated by both groups, was also not adversely placed. Service provisions measured by the failure to provide drugs with the request for later attendance and the failure to collect medicine regularly as well as care for non-HIV disorders among attendees of ART was also not a significant adverse factor among HRGs.

The qualitative analysis identified four predominant themes based on the site of generation. The first theme that emerged was that generated at the community level. Expenditure incurred for travelling as well as the time taken to reach an ART centre was an issue of concern, a statement being made that 'the whole day is spent, wage is lost too.' Barriers at the systemic level were again the long period of waiting and the lack of single window service, causing repeated queuing at multiple windows for service. Statements by subjects were 'a mike is used to call us after one to two hours following registering in the morning', 'Sometimes we carry food and water to sustain ourselves the whole day.' The fact of monetary compensation for travel and loss of wages again resurfaced at this level. The third theme was independent of concerns about monetary compensation. However, unlike the reflection in quantitative analysis, discriminatory behavior from staff members emerged as a prominent point in the theme. In keeping with the quantitative analysis, the prolonged waiting time for HRGs at the ART centre compared to non-HRGs indicates some addressable issue wherein the HRGs are made to wait for service at the end of the session. This possibly raised the request for fewer visits to the ART centre and drug disbursal for a longer period. The fourth theme of individual level barriers re-emphasized out-of-pocket expenditure with additional loss of work translation to monetary loss.

Integrating the quantitate arm and qualitative arm findings, the predominant factors hindering uptake of ART among the HRGs was an interlinked problem. Time taken to travel, expenditure incurred therein added with long waiting periods, compounded with the loss of daily wages (reiterated in both arms), emerged as the most prominent factors. The fact of prolonged travel time with expenditure incurred therein, though not a significant odd among HRGs as compared to non-HRGs, remains a problem in both groups. Suggestions from their end were multiple access to ART and indicating flexibility in collecting medicines from any centres other than scheduled ones, longer duration of drug disbursal, monetary compensation for travel and loss of wages (not for IDUs) and if possible, simplification of administrative service flow with single window services.

CONCLUSIONS

Despite a robust service, updated treatment protocol and intensive administrative rigour, adding benefits like monetary compensation for travel, establishment of protocols to hasten medicine delivery (if possible, further decentralization), coupling other health-related services on a fixed-day basis initially may improve the overall adherence rate. Keeping in mind the increasing trend of mental health problems and literature reviews supporting the requirements of addressable of mental health in this category of the population, a separate agenda of counselling session may be incorporated as a mainstream intervention.

RECOMMENDATIONS

Single window services, keeping total time minimal with facilities to collect medicine from any centre along with the provision of counselling services may be beneficial.

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Profile of COVID-19 Infections among People Living with HIVs (PLHIVs): A Multicentric Cross- sectional Study in Karnataka

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INTRODUCTION

The emergence of a novel coronavirus in December 2019 led to a catastrophic pandemic worldwide, causing high mortality and morbidity. Studies showed that people with risk factors like old age, comorbidities like hypertension, diabetes mellitus, immunosuppression, and other chronic cardiovascular diseases were at high risk of mortality.[1] However, there are very few studies on the effect of COVID-19 on PLHIV. Studies done by Savannah Karmen-Tuohy et al. in New York City and Byrd KM et al. in the United States, documented that there is no significant difference in the presentation of COVID-19, hospital courses or the outcomes of diseases among HIV patients infected with COVID-19 when compared with non-HIV patients with COVID-19.[2,3] A population-based cohort study done in the UK documented that PLHIV have twice the risk of COVID-19 deaths compared with people without HIV, after accounting for demographic characteristics and lifestyle-associated factors.[1] While most of these studies are done in developed countries and in hospital settings, there is a dearth of information about the HIV-COVID-19 infections in the Indian scenario.

OBJECTIVES

To determine the profile of COVID-19 infections and outcomes among PLHIV registered in ART centres and seeking ART care in Karnataka.

METHODS

A cross-sectional explorative study was conducted among registered PLHIVs across ART centres in Karnataka. Data about the COVID-19 co-infection during the period from 1 March 2020 to 30 April 2023 was collected by using a standardized questionnaire. The research team in collaboration with Project Director, KSAPS, DD-ART division and DD M&E, conducted online training w for the staff of ART centres on standardized data tools and on standardized data entry sheets. Data was collected when participants visited for refilling drugs. PLHIV who are severely ill or bedridden or those who will not visit the ART centre for consecutive two months and those who cannot be contacted after three attempts and centres that did not provide the information were excluded. The data on COVID-19 swab tests, results of the tests and if positive, the data on various outcomes of infection, kinds of treatment received, and vaccination status were collected. For quality assurance of data, the research team periodically contacted ART centre staff telephonically and visited some centres to facilitate the data collection. Ethical clearance from the

Institutional Ethics Committee was obtained and informed consent was obtained from the study participants before data collection. Confidentiality of the data was maintained by storing the data records in a separate email and accessible only to the Principal Investigator. The data was anonymized before data analysis and the personal identifiers were removed. Filled data sheets were received from each centre, cleaned and compiled into a single Microsoft Excel spread-sheet and analysed using SPSS–22. The descriptive statistics were presented in the form of frequencies and percentages, and the chi-square test was used to compare various study outcomes (the p-value of $\leqslant 0.05$ was considered statistically significant).

FINDINGS

A total data of 1,25,571 registered PLHIV were obtained from 60 centres across Karnataka. The highest frequency of the study population was observed at the Mysore ART centre (6,361 individuals, 5.07%) and the lowest frequency was observed at the C.V. Raman Hospital (11 individuals, 0.01%). The study population consists of 54734 (43.59%) males, 70551 (56.18%) females, and 286 (0.23%) individuals who identify as transgender/transsexual. The majority of the study population falls in the age groups of 18 to 40 years, accounting for nearly 82% of data and 2431 (1.9%) were children aged 0-8 years. Out of the total 125571 PLHIV, most of them, 91634 (72.97%) were married, while 11733 (9.34%) were single, 5276 individuals (4.2%) were widowed, and 2.5% were divorced/separated. Only 0.20% (252 individuals) were living in, while 10.79% (13550 individuals) had an unknown marital status. Out of 125,571 people in the study population, 112,286 (89.4%) completed vaccination with two doses of COVID-19 vaccine, 117,981 (94.0%) received at least one dose of the vaccine, and only 7,439 (5.9%) were not vaccinated (Figure 2) (Table 1). When gender and vaccination status was compared; among females 94.8%, among males 92.9% and among transgenders 95.5% were vaccinated, the association was found significant.

Table 1: Distribution of study population based on vaccination status

Vaccination status	First dose		Second dose	
	No	%	No	%
Completed	117981	93.4	112286	89.4
Not taken	7439	6.6	13285	10.6
Total	125571	100.0	125571	100.0

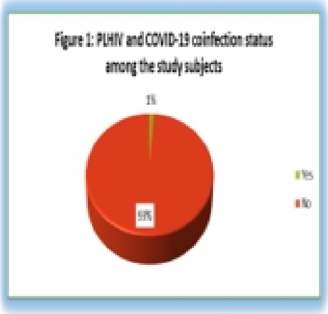
Figure 1: PLHIV and COVID-19 coinfection status among the study subjects

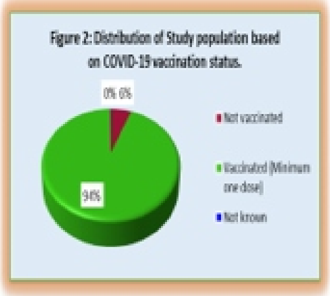
Figure 2: Distribution of Study population based on COVID-19 vaccination status.

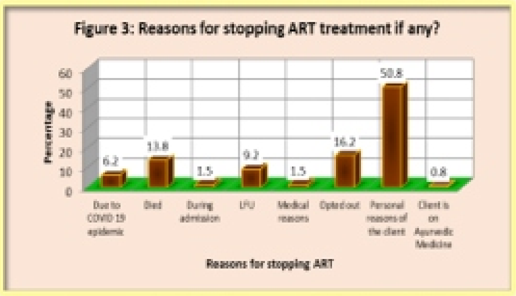
Figure 3: Reasons for stopping ART treatment if any?

Among the study population, 40451 (32.2%) had undergone swab test (either RTPCR or RAT) for COVID-19 at-least once from 1 March 2020 till 1 April 2023. Among the registered PHLIV who reported undergoing a swab test for COVID-19, 477 (1.2%) tested positive (Figure 1). Among them, 265 (55.5%) were males and 212 (44.5%) were females and this difference was statistically significant. Of the 477 tested COVID-19 positive, 457 individuals recovered from COVID-19 infections and 20 died. With respect to treatment received, the majority, i.e., 301 (63.1%) were home-isolated with medication from the hospital or self-medication and 20 (4.2%) died as a result of HIV/COVID-19 co-infections. Out of 130 participants who stopped ART, the majority (50.8%) cited personal reasons for stopping, followed by opting out (16.2%), died (13.8%), LFU (9.2%), and due to the COVID-19 epidemic (6.2%) (Table 2). Only a small proportion of participants reported stopping ART due to medical reasons (1.5%), or because they were taking Ayurvedic medicine (0.8%) (Figure 3). Among the 20 deaths that was reported, 13 were males and 7 seven were females. Most of them, 17 individuals (85%), were in the 26 to 60 years' age range.

Table 2: Type of treatment accessed by the PLHIV with COVID-19 infection

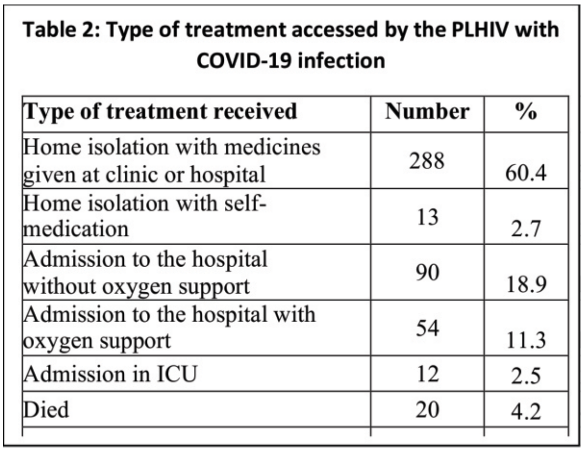

Table 2: Type of treatment accessed by the PLHIV with COVID-19 infection

Type of treatment received	Number	%
Home isolation with medicines given at clinic or hospital	288	60.4
Home isolation with self-medication	13	2.7
Admission to the hospital without oxygen support	90	18.9
Admission to the hospital with oxygen support	54	11.3
Admission in ICU	12	2.5
Died	20	4.2

CONCLUSIONS

Through the study, it was reported that the COVID-19 co--infection as per the swab test results among the study participants was proportionate to the general population. Although the majority of the study population belonged to the age group of 18-40 years, the test positivity was highest among the 26-60 years' age group. Gender-wise distribution indicated that males were more significantly more affected by COVID-19 co-infection than females which may be attributed to the greater mobility of males and hence more exposure. Moreover, female PLHIV had better health-seeking behaviour when compared to males, according to the data analysed with respect to getting vaccinated with two doses, getting nasal swab tests done, getting treatment, and also in recovery. Furthermore, 96% of the COVID-19-positive PLHIV have recovered and 4% of them have died due to COVID-19 disease which is similar to that of the general population. So, there is no difference among death rates among PLHIV and general population. Among the deaths due to COVID-19, most of them were males (65%) which has to be further studied.

RECOMMENDATIONS

The staff of ART centres may document the vaccination status of all PLHIV visiting the centre for refilling the drugs as almost 60% of the swab test status of the PLHIV was not known. As a preparedness plan for further epidemics, the programme should plan the system to periodically report the status of infections among PLHIV which includes documenting the symptoms, testing status, vaccination status, and admission status among PLHIV.

All adult PLHIV may be vaccinated with a complete vaccination schedule, i.e., two doses of vaccination, especially among males.

Research on the cause of death may be done to identify the gaps in the services/manpower/communication/difficulty in accessing health services and strategies to overcome these gaps.

ACKNOWLEDGEMENTS

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Unmet Mental Health Needs of PLHIV: A Mixed-Method Study

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INTRODUCTION

Mental health disorders are common comorbidities among PLHIV across the world and are more prevalent among PLHIV than in the general population. 50% of PLHIV meet criteria for one or more mental health disorder or substance use disorder. Psychological distress and mental disorders have been consistently associated with suboptimal HIV treatment outcomes, including late ART initiation and lack of timely viral suppression.

HIV-related stigma has been associated with poor mental health among PLHIV, including symptoms of depression and post-traumatic stress disorder (PTSD). Low levels of social support have similarly been identified as a risk factor for poor engagement in HIV treatment and poor mental health among PLHIV. Stigma, either internalized or experienced, affects the mental health of PLHIV which, in turn, affects medication adherence. Lack of awareness about mental health among the patient population as well as health care providers has led to an increase in the distress levels with worsening of emotional burdens, reduced coping, and a poor quality of life. Owing to the dearth of literature on the unmet mental health needs of this population, focusing on psychopathological care, coping with stigma, and perceived social support and treatment barriers to mental health, this study documents the unmet mental health needs, outcomes, and experiences of PLHIV and experiences of health care providers (HCP) at ART centres under MDACS in Mumbai, India.

METHODS

A mixed-method study design, including both quantitative (questionnaire-based study) and qualitative (descriptive study) components was used. The study was undertaken at two randomly selected ART centres under MDACS, Mumbai, one with psychiatric services (OPD, Bandra Bhabha Hospital) and one without psychiatric services (L&T ART Centre, Andheri).

For quantitative analysis all health care providers (n=60) who included doctors, counsellors, nurses, outreach staff at the two ART centres were recruited in the study and given the questionnaire for filling after informed consent. A 22- item questionnaire with three-point Likert Scale rated questions and some open-ended questions, validated by the faculty of Medicine, Psychiatry and Community Medicine was given to the health care staff. An open-ended interview guide was prepared and validated separately for the two FGDs for HCP and the three FGDs for subgroups of PLHIV, i.e., those recently diagnosed with HIV, women, and MSM. Focus group discussions were then carried out with health care providers (HCP) who included doctors, counsellors, nurses, and outreach staff at the two ART centres in English or preferred local languages (Hindi/Marathi) by investigators on two separate days. The FGDs with HCP also gave more information regarding the prevalence of mental health issues in PLHIV subgroups. These three PLHIV subgroups were identified from the available literature with significant mental health problems. Participant information sheets were given to the participants and informed consent was taken for all participants in the FGD. The sample size was six to seven participants in each FGD group among PLHIV with mental health comorbidities and 8–10 for FGDs in HCPs. All the FGDs were conducted at a preidentified room where privacy was maintained at the two ART centres. The FGDs and in-depth interviews were audio-recorded after obtaining informed consent. Post FGD and the interview, the summary was shared with the participants.

FINDINGS

Quantitative: Nearly 75% HCPs were aware about various mental health problems. When their knowledge of mental disorders and skills in identification of common mental health disorders was assessed then nearly 98% of participants had awareness of substance use, anxiety, depression, and suicidal risk. 75% could identify at least three symptoms of depression and anxiety. Nearly 65% knew symptoms of psychosis and substance use disorders. Nearly 90% were aware of treatment options for mental illness. Only 38% HCPs felt that substance use disorder can lead to poor ART adherence. About 72% HCPs was aware that mental health disorders can be treated. No responses were received from participants regarding awareness of mental health services at any ART centre or their referral for the same. Only 13% expressed challenges in referring patients, 44% said there was family support, 71% denied receiving any training for identification or counselling of patients of mental disorders.

Barriers in accessing mental health services: Eight HCPs mentioned challenges experienced in referring patients to mental health services or for follow-up. 21 HCPs did not face any difficulty in referring patients. 27 of them (44%) mentioned availability of family support when referring PLHIV for mental health services, while there was resistance from the family for the same as per the experiences of 12 HCPs. On asking for their own experience in counselling any PLHIV, 27 (44%) replied that they had gone in for counselling, with four having no experience with any counselling. The majority of the health care providers (70.5%) stated that they had neither received any kind of training for identifying mental disorders, nor any training in counselling for mental health issues. Only 15 (24.5%) mentioned having received some kind of training in the past in identifying mental disorders and in counselling patients regarding mental health issues.

Mental health problems along with stigma and discrimination were higher in PLHIV-MSM group as compared to 'newly diagnosed' and 'women'. The major problems faced by the PLHIV (MSM) group was related to the psychological, social, and economic problems which focused on stigma and discrimination from family members, relatives, and office staff at the workplace. This was followed by mental health problems such as suicidal thoughts and fear of impending death. Respondents emphasized the need of awareness among people about HIV, family support, and support groups for PLHIV. Women suggested creating awareness among general people as they felt that families may accept PLHIV, but society may not. They suggested conducting surveys among PLHIV to know their mental health problems and plan accordingly. They suggested having separate wards, emergency, and dialysis sections in hospitals for PLHIV as in general wards their files are tagged as PLHIV, which is embarrassing to them. They suggested hospice-like services where terminally sick patients can spend their last days. [Compared to MSM-PLHIV, women with PLHIV seem to have better family support and relatively less mental and psychological problems].

Emotional reactions were commonly seen in newly diagnosed PLHIV as compared to PLHIV who were from 'MSM' group or in the 'women' group. This could be because of the adjustment issues faced by newly diagnosed patients of HIV after the diagnosis, in terms of denial about diagnosis, worry about the future, and self-blame.

CONCLUSIONS

The study explored the unmet mental health needs among various subgroups of PLHIV registered for care at ART centres in Mumbai. The study also assessed the awareness about common mental health issues and challenges in identification and referral of PLHIV with mental health issues to psychiatry speciality services. The study assessed the difficulties and obstacles that hindered PLHIV from seeking assistance, including psychological discomfort, HIV-related stigma, and a lack of social support. The need for training HCPs at ART centres in mental health for prompt referral and management including the counselling support for family and caregivers are highlighted.

RECOMMENDATIONS

ART staff need to be trained in the common mental health illnesses, their symptoms and the screening skills for mental health issues among PLHIV. SOPs for screening for mental and emotional health problems among newly registered patients and other priority patients for adherence and behavioural issues need to be developed. Appropriate referral linkages for diagnosis, treatment, and follow-up services with psychiatry OPDs within the institute or higher institute need to be set up.

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Feasibility Evaluation of Integration of Screening and Management of Hypertension and Diabetes Mellitus (Type 2) for PLHIV through ART Centres: A Mixed-methods Study

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INTRODUCTION

The introduction of antiretroviral therapy (ART) in the management of human immunodeficiency virus (HIV) infection has resulted in increased life expectancy of people Living with HIV (PLHIV), altering HIV pathogenesis from an acute to a chronic disease [1]. Globally, between 2000 and 2019, new HIV infections fell by 39% and HIV-related deaths fell by 51%, with 15.3 million lives saved due to ART [2]. The current magnitude of HIV/AIDS in India as reported by UNAIDS is as follows: (17 June 2022) [3]

Adults aged 15 to 49: HIV prevalence rate	0.2
HIV incidence per 1000 population (all ages)	0.05

Despite this recognizable success of ART, there are still challenges faced by people living with HIV, such as increased prevalence of metabolic and cardiovascular abnormalities such as lipid abnormalities, diabetes, and hypertension [4,5]. HIV-infected individuals have a twofold higher risk of CVD morbidity and mortality compared to their uninfected counterparts [6].

The study was conducted to assess the feasibility and sustainability of integrating hypertension and diabetes management into routine HIV care through a set of feasibility indicators. MDACS has piloted single window person-centric services for screening and management of hypertension and diabetes among all PLHIV across all ART centres. The mixed-methods study explored the acceptability, coverage, feasibility, and sustainability of the approach for its scale- up.

METHODS

Study Design: Descriptive study, mixed methods, triangulation design

Study duration: 22 February to October 2022 (eight months)

Qualitative methods: Focus Group Discussions (four), one with health care workers (HCW) and with PLHIV at two adult ART centres.

Quantitative methods: Analysis of secondary data related to attendees of adult ART centres (PLHIV) regarding implementation and adaptation of integrated management of hypertension and diabetes mellitus.

Study area: Two ART centres in Mumbai located in secondary care hospitals were selected.

STUDY TOOLS AND SELECTION CRITERIA

Qualitative study component

For FGD involving PLHIVs: Those who have been 'screened' for hypertension and diabetes mellitus and/or 'known diagnosed cases' of hypertension and diabetes mellitus.

For FGD involving HCWs at ART centres: ART medical officers, counsellors, laboratory technicians, nursing staff, care coordinators.

Key Informant Interview (KII): Key Informant Interviews (two) of medical officers at both study sites. One site had an additional medical officer I/C.

Quantitative study component

Secondary data records related to screening of PLHIV for hypertension and diabetes mellitus were routinely maintained in Excel sheets.

Secondary data about implementation and adaptation of integrated management/convergence of hypertension and diabetes mellitus at ART centres.

DATA ANALYSIS

Qualitative data

The data was categorized as per the domains identified for feasibility evaluation indicators of acceptability, demand, implementation, practicality, integration, adaptation, and expansion of services at ART centres for screening and management of hypertension and diabetes.

'Thematic content analysis' was done for interpretation of the data.

Quantitative data

The outcomes were analysed with variables such as age, gender, range of CD4 count and other concomitant diseases as well as treatment and programme- related outcomes.

FINDINGS

Qualitative data

FGD: PLHIV at ART centre

The participants of FGD expressed their satisfaction about the services for reasons like convenience, diagnosing the undiagnosed morbidity and availability of medicines as a single window service.

Their suggestions to improve quality of health care included: quick services, regular availability of medicines, better ambience, availability of online reports, and better communication from the HCW.

Almost 50% of the participants reported having family support to deal with lifestyle changes in management of HTN/DM.

FGD: HCW at ART centres

The majority of the HCWs at ARTCs were satisfied with the integrated services' approach; some of them said that they themselves got to learn about HTN/DM in the implementation process.

In the initial phase of this activity, HCWs perceived it as an additional work and burden.

Challenges:

Infrastructure related: shortage of antidiabetic medicines, inadequate staff, discrepancy in the duration of ART dispensation and HTN/DM medications, causing inconvenience to patients and increased frequency of visits, non-availability of separate containers for dispensing medicines.

Patient related: the level of awareness regarding the need of HTN/DM as well as the stigma related to getting labelled as a hypertensive or a diabetic was observed. They were convinced about the importance of education about nutrition and physical activity for the patients.

KII WITH NCD PROGRAMME OFFICER (WHO)

Issues identified

Supply chain management of drugs and consumables (major issue), no robust supply of drugs for HTN/DM at the PHCs

Behaviour change concerns related to awareness about regular screening for NCDs and preference of services, people's attitude towards the health system with preference for the private sector,

Human resource issues for capacity building and training of staff on a regular basis,

Quantitative data

ARTC1 (BDBA hospital) and ARTC2 (Shatabdi Hospital, Govandi)

The mean age of ARTC-1 attendees was 44.2 years SD of 11.9 years.

The mean age of ARTC-2 attendees was 44.9 years with SD of 10.7 years.

In ARTC-1, 2490 (58.8%) are males, 1704 (40.2%) females and 42 (1.0%) transgenders. In ARTC-2, 1259 (51%) are males followed by 1186 (48.1%) females and 22 (0.9%) transgenders.

During the screening process, 508 (12.5%) and 350 (14.7%) patients were newly diagnosed with HTN in ARTC-1 and ARTC-2 respectively, while 371 (9.1%) and 209 (8.8%) patients were known cases of HTN.

On assessing the treatment and control status among the new and unknown HTN patients, it was found that 669 (76.1%) and 335(59.9%) were on treatment at ARTC-1 and ARTC-2 respectively.

It is seen that the proportion of newly diagnosed HTN patients started on treatment varied significantly as per their grade. Among patients with grade-I HTN, 219 (58.7%) and 93 (57.8%) patients at ARTC-1 and ARTC-2 respectively were on treatment. Among patients with grade-II it was noticed that 172 (79.6%) and 91(43.8%) were on treatment from ARTC-1 and ARTC-2 respectively.

CONCLUSIONS

The integrated NCD screening services for HTN and DM among PLHIV at ART centres during their routine visits by ART centre staff were functioning smoothly.12.6% and 7% patients were newly diagnosed with HTN and DM respectively. PLHIV beneficiaries were satisfied with NCD screening services and supply of anti-HTN medicines in a single window service. The need for inclusion of BP and blood sugar values in routine MIS for regular follow-up and to achieve control was shared by programme managers. The study highlighted the importance of integrated NCD services for PLHIV through ART centres to ensure 'patient-centric' care in a seamless manner.

RECOMMENDATIONS

The regular training, supervision and motivation of ART centre staff is needed for continued screening of PLHIV for HTN and DM for early diagnosis and management in an integrated manner.

Ensuring adequate supply of testing kits, medicines for treatment of HTN and DM at ART centres for patient-centric services.

The simple user-friendly IEC material for lifestyle management of HTN/DM need to be developed and made available at ART centres.

Incorporation of routine tests of blood pressure and sugar values in MIS to facilitate tracking and follow-up through training of data managers.

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A Mixed-Method Study on the Burden of Non-Communicable Diseases (NCD) and Utilisation of NCD Services among PLHIV in Puducherry

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INTRODUCTION

Despite being an infectious disease, care for patients with HIV infection has evolved into a chronic care model, that involves patient follow-up, continuity of care, monitoring, management of co-morbidities and auxiliary services to maintain patients' health and quality of life. With increasing access and scale-up of antiretroviral therapy, PLHIV now tend to live longer and are at risk of noncommunicable diseases (NCDs). NCDs, often referred to as non-AIDS events, have become major causes of morbidity and mortality among PLHIV

The objective of the study was to estimate the prevalence of the NCDs and its risk factors among PLHIV. The qualitative component aimed at exploring the perception of the PLHIV with NCDs regarding their utilization of NCD services from any health facility and why they prefer to go there.

METHODS

A mixed-methods study with a cross-sectional record-based quantitative component and in-depth interviews as qualitative components was conducted between July and December 2022 among 500 PLHIV who were registered at the ART centre, IGMCRI. Prior approval from PACS and the Institute Ethical Committee were obtained. Records were reviewed and information on socio-demographic characteristics, risk factors for NCD, and lab investigation values were recorded in a proforma. Out of 500 PLHIV, 40 with NCDs were selected purposively for in-depth interviews. Topics like perceptions of the PLHIV about NCDs, its risk factors, prevention, control, and management, utilization of NCDs services, barriers in accessing NCD services etc were explored. Quantitative data was analysed using SPSS software version 21. Qualitative data was categorized and analysed as themes and categories.

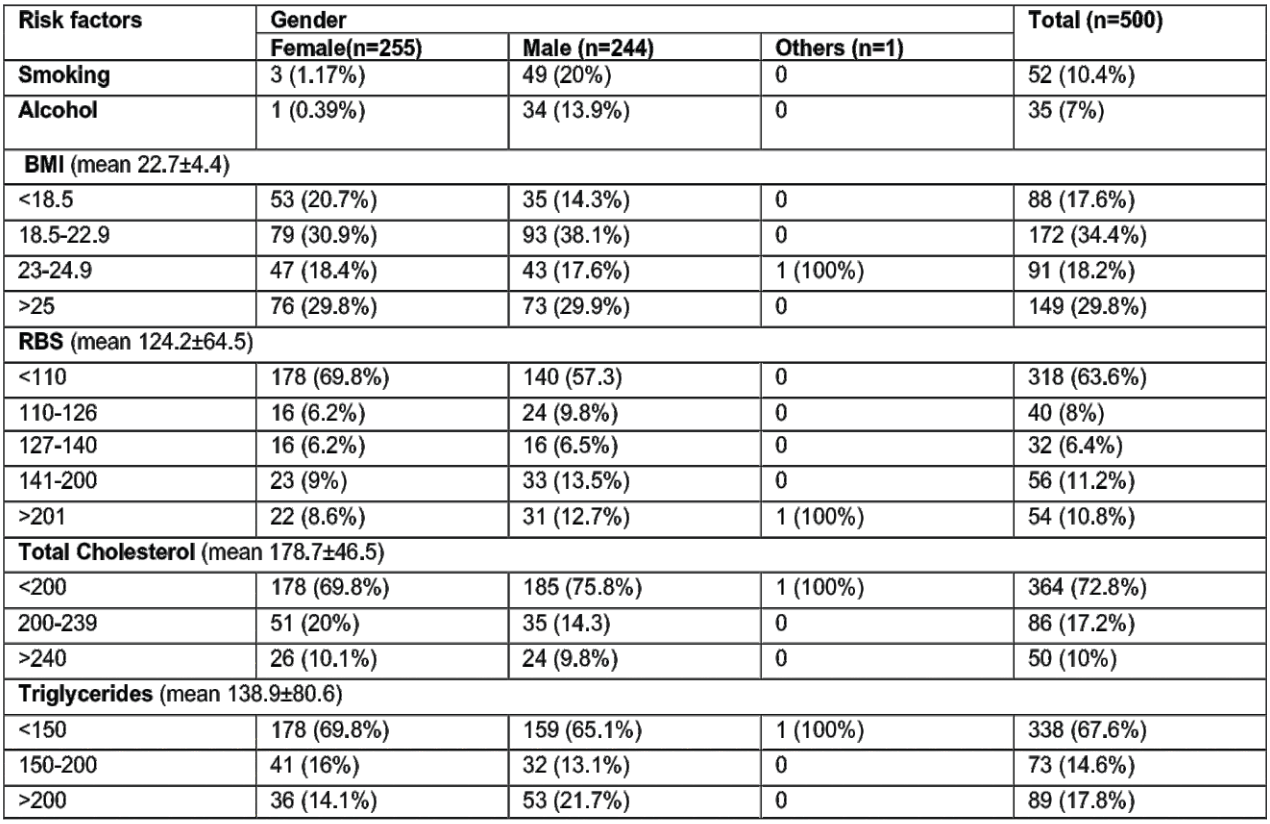
RESULTS

Out of 500 PLHIV around 51% were females. The mean (±SD) age of the participants was 44.5 ± 11.7 years with 53.4% in the 31–50 age group. Out 500 PLHIV recruited, 52 (10.4%) were known to be diabetic, 24 (4.5%) were known as hypertensive, and 10 (2.0%) are known cases of CAD.10.4% of the study participants have a history of smoking and 7% have a history of alcohol consumption;18.2% were overweight and 29.8% were obese. Elevated random blood sugar (>201mg%), triglyceride (>150 mg%)

and total cholesterol values (>200 mg%) were found in 10.8%, 32.4%, and 27.2% of the study participants respectively. Most of the patients with coexisting NCDs preferred consulting a private practitioner because of anonymity in private clinics. High patient loads, long queues, long waiting time, HIV associated stigma in the government hospitals was perceived as a barrier in utilization of services of the NCD clinics.

They suggested that comprehensive NCD services, including diagnostics, treatment, and follow-up, could be provided in the ART centre itself. Stigma associated with HIV was specific to the disease. 80% of the respondents mentioned that they would prefer NCD services in the ART centre itself. Most of the diabetic patients on insulin are not aware and were not practising safe disposal of the insulin syringes. Most of them either dispose the syringes in common dustbins without disinfection or buried them in the ground.

Table 1. Risk factors for NCD among PLHIV



Risk factors	**Gender**			**Total (n=500)**
	Female(n=255)	**Male (n=244)**	**Others (n=1)**	
Smoking	3 (1.17%)	49 (20%)	0	52 (10.4%)
Alcohol	1 (0.39%)	34 (13.9%)	0	35 (7%)
BMI (mean 22.7±4.4)				
<18.5	53 (20.7%)	35 (14.3%)	0	88 (17.6%)
18.5-22.9	79 (30.9%)	93 (38.1%)	0	172 (34.4%)
23-24.9	47 (18.4%)	43 (17.6%)	1 (100%)	91 (18.2%)
>25	76 (29.8%)	73 (29.9%)	0	149 (29.8%)
RBS (mean 124.2±64.5)				
<110	178 (69.8%)	140 (57.3)	0	318 (63.6%)
110-126	16 (6.2%)	24 (9.8%)	0	40 (8%)
127-140	16 (6.2%)	16 (6.5%)	0	32 (6.4%)
141-200	23 (9%)	33 (13.5%)	0	56 (11.2%)
>201	22 (8.6%)	31 (12.7%)	1 (100%)	54 (10.8%)
Total Cholesterol (mean 178.7±46.5)				
<200	178 (69.8%)	185 (75.8%)	1 (100%)	364 (72.8%)
200-239	51 (20%)	35 (14.3)	0	86 (17.2%)
>240	26 (10.1%)	24 (9.8%)	0	50 (10%)
Triglycerides (mean 138.9±80.6)				
<150	178 (69.8%)	159 (65.1%)	1 (100%)	338 (67.6%)
150-200	41 (16%)	32 (13.1%)	0	73 (14.6%)
>200	36 (14.1%)	53 (21.7%)	0	89 (17.8%)

CONCLUSIONS

Diabetes mellitus is the common NCD among PLHIV. Risk factors for NCDs should be assessed in PLHIV for early diagnosis and management. Health education for PLHIV should also include lifestyle modification for prevention of NCDs. Single window integrated services are recommended for management of PLHIV and NCDs.

RECOMMENDATIONS

Risk factors for NCDs should be routinely assessed in PLHIV for early diagnosis and management. Health education for PLHIV should also include lifestyle modification for prevention of NCDs. Single window integrated services are recommended for PLHIV and NCDs for effective management.

ACKNOWLEDGEMENTS

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Reasons for increase in lost to follow up (LFU) among PLHIV on treatment in Gujarat

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INTRODUCTION

In line with Sustainable Development Goals under target 3.3, India is committed to 'End the epidemic of AIDS' as a public health threat by 2030 [1]. HIV infection has no cure, but effective prevention, early diagnosis, prompt treatment and care for HIV as well as opportunistic infections, has enabled PLHIV to lead a long and healthy life.

The goal of Antiretroviral Therapy (ART) is to achieve maximal and durable suppression of viral load in PLHIV leading to immune reconstitution with improvement in quality life. However, the proportion of loss to follow up (LFU) patients on ART increased from 25% in 2019-20 to 29% in 2020-21, which may be attributable to the lockdown during COVID-19 pandemic. In India during 2020-21, there were 162 PLHIV as LFU for every 1000 PLHIV on ART with a total of around 2.25 lakh LFU PLHIV [2].

Improving follow-up of PLHIV is critical to improving retention. The reasons that lead to loss to follow up must be identified and addressed. This study was conducted to understand the reasons for loss to follow up among PLHIV on ART in Gujarat.

METHODS

A concurrent mixed method (Cross-sectional study for quantitative data and in-depth interviews for qualitative data) study was conducted between November 2022 to March 2023 among 263 LFU PLHIVs registered at an ART plus center attached to tertiary care Civil Hospital, Bhavnagar. Secondary data of all 263 LFU patients was obtained from ART plus center Bhavnagar and in-depth interviews were conducted among 19 LFU PLHIVs to understand the reasons for their loss to follow up. The reasons for loss to follow up of 41 LFU PLHIVs from Amreli ART centre obtained through secondary data from VIHAAN (NGO) Amreli were also documented.

FINDINGS

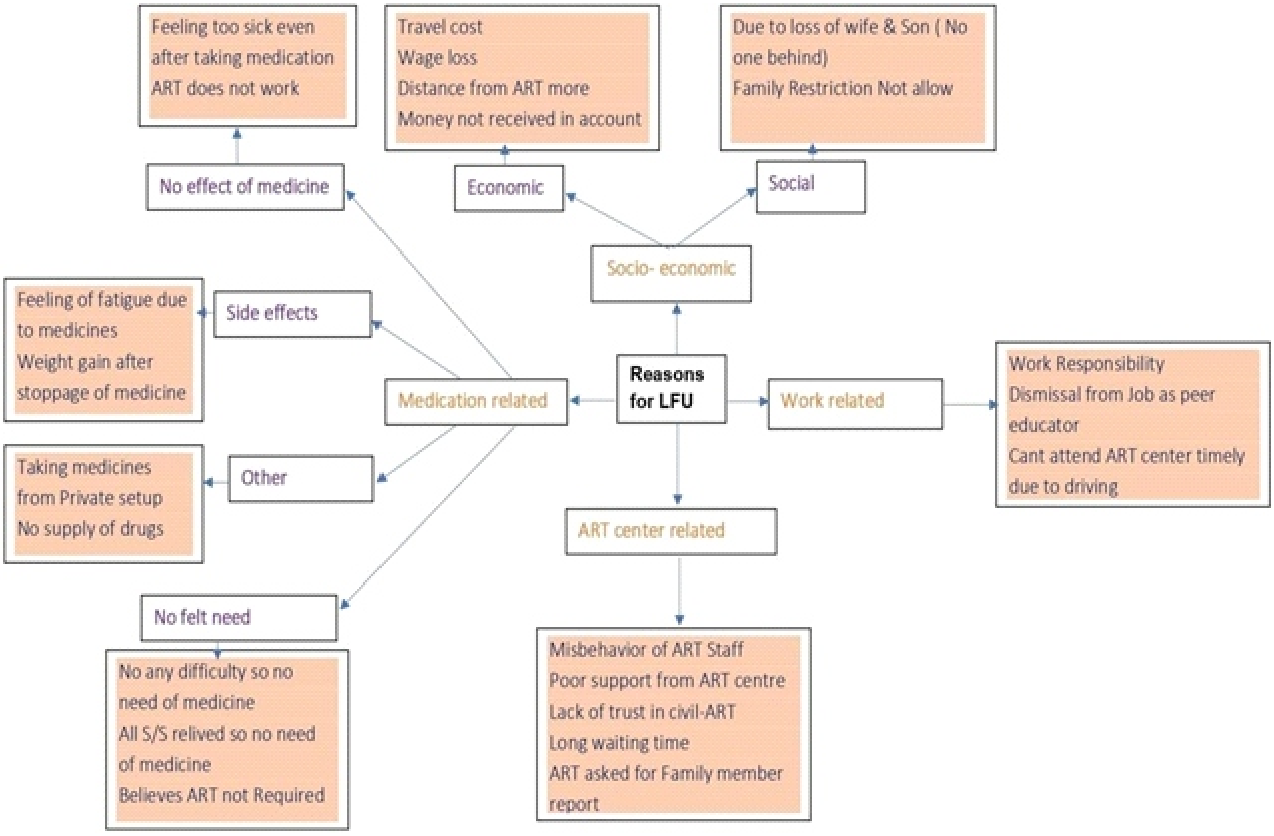
Out of 263 LFU patients, 42.21% had migrated, 19.77% had given their incorrect or incomplete details (address and contact numbers) and 15.21% had died. Therefore, only about 47 LFU patients could be contacted by phone, and out of them only 19 could be interviewed by home visit. Others did not consent to meet personally due to perceived stigma (13), due to fear of identity disclosure (7); or agreed but did not remain present at the decided place during the time of visit (8).

The major reasons for loss to follow up found through secondary data from Amreli were side effects due to medicine (41.46%), reports of feeling no need to take medicine because of the absence of symptoms (17.07%), non-acceptance of their HIV status (14.63%), reports of feeling better when not on medicine (14.63%) and reports from private laboratory that individual was negative for HIV (12.20%).

However, according to the in-depth interviews of 19 LFU PLHIVs, the major reasons found for loss to follow up were: Individuals felt no need to take medicine because of the absence of symptoms, (63.16%), side effects of the medicine (21.05%), poor support from ART centre (21.05%), misbehaviour of ART centre staff (15.79%), symptoms were relieved so they stopped taking medicine (15.79%) and long waiting hours (15.79%).

All these reasons were grouped into seven categories which were further grouped into four major themes namely: socio-economic, medication-related, ART centre-related and work-related.

Figure 1: Factors influencing LFU status among PLHIV



CONCLUSIONS

Major reasons found to be responsible for loss to follow up were:

Medicine-related factors included side effects, not feeling better even after taking medicine, and feeling no need to take medication.

ART Centre-related factors included misbehaviour of ART staff with patients, poor support from ART centre, lack of trust in civil ART, and long waiting time.

Socio-economic factors like fear of disclosure of status, family restrictions to take medicine, travel cost, and wage loss.

RECOMMENDATIONS

Effective drug adherence counselling regarding initiation and continuation of ART is to be focused. Particularly the need for ART, minor side effects, and its benefits in the prevention of transmission.

Capacity building and motivation of ART staff and community support centre personnel.

A feedback session or feedback system, like helpline at ART centre or at affiliated NGO whenever patients come to visit ART centre, may help in developing trust among government systems.

As migration was a major issue for LFU, Aadhar-based enrolment of patients may help to track the patients in the future.

Reminders through telecommunication may be helpful to improve adherence.

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Late Detection of HIV and Its Associated Factors Among PLHIV Registered in ART Centers in Kerala

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INTRODUCTION

Late detection of HIV has been identified as a major challenge for preventing and controlling HIV. Though Kerala is a low prevalent state for HIV a major gap observed is a small but significant proportion of late detection of HIV. In order to prevent the transmission of HIV and reach elimination targets, it is important to identify and address the associated factors and the pathways involved in late detection.

Late diagnosis of HIV, especially in the young population accounting for roughly one-third to half of new HIV infections, remains a significant challenge as substantiated by numerous studies. Several factors contribute to this, including limited disease knowledge, its transmission methods, societal stigma, and restricted healthcare access, among others. Insufficient HIV detection and late presentation to antiretroviral therapy (ART) pose significant public health challenges.

Late detection can lead to delayed initiation of ART compromising immunity and inviting many diseases as well as spreading the infection to others. The actual burden of late diagnosed cases and knowing its factors are necessary for providing inputs to bringing in programmatic changes for improving the success rate of the NACP. It is in this context that the current study is conducted with the following objectives.

OBJECTIVES

To find out the proportion of late diagnosis of HIV among PLHIVs registered at ART centres in Kerala.

To study the factors associated with late diagnosis of HIV among PLHIVs registered at ART centres in Kerala.

To study the factors leading to pre-ART and on-ART deaths among PLHIVs registered at ART centres in Kerala.

To explore the client and provider perspectives on pathways of health seeking, treatment options and general health conditions of PLHIVs detected late using qualitative methodology.

METHODS

The study employed a mixed method approach. For Objective 1, a record-based secondary data analysis was done to estimate the proportion of late diagnoses of HIV among PLHIVs registered at ART centres. A case-control design with HIV stage III and IV as cases and Stage I and II as controls were done for Objective 2. To fulfil Objective 3 and Objective 4, a qualitative study was performed. For Objective 1 and Objective 2, the ART centres were chosen as the study setting. For Objective 3 and Objective 4, Palakkad and Thiruvananthapuram districts were selected.

For Objective 1, all new PLHIVs registrations at ART centres from 2020 to 2022 were selected through the census method. For Objective 2, the study participants were PLHIVs registrations at ART centres from 2020 to 2022. From the secondary data analysis in the first objective, late detection was identified and grouped into two namely cases and controls. However, consent was not able to be obtained from the PLHIVs, and therefore secondary data was taken for further analysis. A total of 522 cases and 1099 controls were selected to fulfil Objective 2.

For Objective 3, caregivers of PLHIVs who were categorized as pre-ART and on-ART deaths were selected through convenience sampling. For this, caregivers who were aware of the HIV status of the PLHIV and those who were ready to provide consent were only selected. A total of 10, five each for caregivers of PLHIV who were categorised as pre-ART death and on-ART, were selected. For Objective 4, to explore the client and provider perspectives, PLHIVs registered at ART centres during 2020-2022 and Medical Officers of Government, Medical Colleges or hospitals including PHCs, Private Medical Colleges or hospitals, ICTCs and ART centres and State and district level programme officers were selected. PLHIVs who had given consent and were in a condition to respond were selected. Even though Palakkad and Thiruvananthapuram districts were selected initially, only data from the Palakkad district were available. The PLHIV and the Positive Network Representative were included in the study to elicit the client's perspective. For the provider's perspective, purposive sampling was done.

FINDINGS

Out of the total PLHIVs (N=2927) the late detection (N=753) rate is 25.7%. Among the ART Centers, Kasaragod reported the highest proportion of late detection at 48.89%, while Idukki reported no instances of late detection. Among the total PLHIVs, the clinical staging of some PLHIVs was not available. Hence, when the unknown group (N=258) was eliminated from the analysis, the overall actual late detection among PLHIVs across the ART centres was 28.2%. Among the total 2669 cases of PLHIVs, a majority (58.3%) were detected in Stage I, 13.4% in Stage II, 11.8% in Stage III, and 16.3% in Stage IV. Among the total 2927 PLHIVs, 1304 PLHIVs were excluded from detailed analysis due to a lack of complete data. The remaining 1623 PLHIVs were analysed further. Of the 1623 PLHIVs studied, the mean age (SD) was 45.24 with a standard deviation of 11.2.

Bivariable analysis indicated that factors like age, gender, partner status, risk category, mode of transmission, and partner testing status are all associated with the PLHIVs' late detection. Compared to PLHIVs aged 45 and above, it is found that adults less than 45 are at a lower risk of late detection (OR= 0.49). The male PLHIVs have higher odds of late detection (OR=1.3) than female PLHIVs. PLHIVs currently with a partner have higher odds of late detection (OR= 2.7) than PLHIVs who are currently living single. PLHIVs belonging to the general risk category have higher odds of late detection (OR= 1.9) than PLHIVs who belong to the high-risk group. The PLHIVs with non-tested partners have higher odds of late detection (OR=1.3) than PLHIVs with tested partners.

Binary logistic regression was used to examine whether the significant factors mentioned above could predict late detection. The model was statistically significant (p value < 0.001) and could explain 28.8%

(Nagelkerke R square) variance in the dependent variable. As shown in the table, age, gender, partner status, risk category and mode of transmission, and partner testing status significantly contributed to the model.

Qualitative analysis showed that patients with “on ART” and “pre-ART” deaths both experienced similar signs and symptoms as well as the same levels of family support. Those patients who died before ART initiation had a lack of awareness about ART medication and were less interested in taking it. Most of them were found to have suffered from fever and pneumonia which later got worse and led to unconsciousness and death. Almost all the patients under ART and without ART passed away in the hospital.

Most of the clients perceived the health staff as non-judgmental and approachable. Positive Network Representatives encouraged PLHIVs to continue treatment and empathetically helped them deal with stress and anxiety. Based on the healthcare providers' feedback, it's evident that early diagnosis is pivotal for the successful treatment of the condition.

CONCLUSIONS

One in every four PLHIVs was detected during the late stage of HIV. The factors favouring early detection include young PLHIVs and the sexual route of HIV transmission. The risk factors identified for late detection were male gender, currently living with a partner, general category, PLHIVs with partners not tested. The study on factors leading to on-ART and pre-ART deaths identified late diagnosis and low awareness of ART medications respectively contributed to fatal events.

The perspectives of PLHIVs on HIV diagnosis and treatment pointed towards the role of health care staff's attitude towards them and their engagement with PNRs in alleviating anxiety and improving treatment adherence. The healthcare provider's perspective on PLHIVs on late detection was wide and varied. Knowledge about potential exposure to HIV irrespective of symptoms shall be directed toward HIV screening. Lifestyle modification, stigma reduction and a supportive environment determine treatment adherence and improve the quality of life of PLHIVs.

RECOMMENDATIONS

Robust IEC targeting both the general community and healthcare providers is essential to champion early HIV screening, disseminate awareness about ART medications, ensure their accessibility, emphasize early initiation, and reduce stigma. Healthcare facilities shall focus on conducting more screening camps, and the involvement of healthcare providers and PNR can help clients enhance their confidence and adherence to treatment.

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Determination of Barriers and Enhancers of Retention and Loss to Follow-up among People Living with HIV: A Multicentric Mixed Method Study

Authors

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INTRODUCTION

The Government of India launched the free ART (Antiretroviral Therapy) initiative on April 1, 2004. Since then, there has been massive scale-up and decentralization of ART services with the aim of universal access to life-saving ART for all. The Government of India is committed to providing universal access to comprehensive, equitable, stigma-free, quality care, support, and treatment services to all PLHIV through an integrated approach.

India's ART programme is the second largest globally. The impact of the program is evident. The adult HIV prevalence at the national level has continued its steady decline from an estimated peak of 0.38% in 2001-03 through 0.34% in 2007 and 0.28% in 2012 to 0.22% in 2017. The life-saving ART has improved millions of lives. Our country is committed to achieving the Sustainable Development Goal of ending AIDS as a public health threat by 2030 and is signatory to the UN strategy of 95-95-95 by 2030 which aims at achieving:

95% of the estimated PLHIV know their status, of which

95% PLHIV are on ART, of which

95% PLHIV have viral suppression

Regardless of the expansion of ART services, loss to follow up (LTFU) is a serious public health concern throughout the world. 'Loss to follow up' is defined as when PLHIV stopped ART follow-up for 3 months or longer due to various reasons such as long distances to the clinic, high transportation costs to the clinic, and work responsibilities.

The exact prevalence as well as the reasons for LTFU are still unexplored, especially in Punjab. Therefore, we planned to assess the rates of LTFU among PLHIV as well as to determine the various factors associated with retention as well as LTFU among these patients. **The specific objectives** for this study were:

To assess the rate of LTFU among PLHIV registered at ART center, Government Medical College, Amritsar.

To determine various factors associated with LTFU and ART retention.

To suggest appropriate solutions to minimize LTFU among PLHIV on ART.

METHODS

A Retrospective Cohort study was conducted using a mixed method approach at two public health ART centers: Government Medical College, Amritsar and Guru Gobind Singh Medical College, Faridkot. PLHIV who were registered and initiated on ART at these study sites between the period of January 1, 2015 to December 31, 2020 formulated the study population to allow a follow-up of at least 12 months.

The socio-demographic and clinical details were extracted from line list and white cards. A simple random sampling technique was used to select the study participants. The dead PLHIV and transfer-outs were excluded from the study.

The patients who were labelled as LTFU were telephonically contacted to know their current health status as well as reasons for not continuing the treatment. Their replies were recorded during the phone call and verbatim writing followed within 2-3 hours of the phone call in order to avoid any recall bias. The study participants were included only after taking verbal informed consent and excluded if they were not found available on 3 repeated calls on separate days. Immediately next person in the random list was called in case of exclusion to complete the sample size.

During the conversation, if the patient agreed, a home visit was made to conduct an in-depth interview.

Equal number patients still on treatment were also interviewed at the ART centres when they came for follow-up visits to identify the enablers for continuing treatment. One-to-one interviews with them were organized in a secluded place and voice recording was done using a voice recorder after taking written informed consent from these patients. Any gaps in information were filled by telephonically connecting the patients the verbatim was recorded by the researcher during the interview and then analysed accordingly.

Statistical analysis:

The quantitative data was compiled using Microsoft Excel and was checked for consistencies and completeness and then cleaned and edited prior to performing analysis in SPSS 20.0. The patient characteristics were described in terms of mean (for continuous variables) and proportions (for nominal & categorical variables). For data analysis, the cohort was stratified into three age groups i.e., children ($\leqslant$ 10 years), adolescents (aged 11-19 years), and adults (aged $\geqslant$20 years). Kaplan-Meir technique was used to estimate the time to LTFU after initiation of ART and log-rank test was used to test the significance of observed differences between groups. The Cox proportional hazards regression model was used to determine predictors of LTFU, expressed as estimated hazards ratios (HRs) with 95% confidence intervals (CIs).

For qualitative data, the recorded interviews were transcribed in verbatim within 2-3 hours to avoid any recall bias by the researcher and translated into English from local language (Punjabi). Content was compared with original transcripts of Punjabi to find any discrepancies. If identified they were resolved by the researcher. Data analysis was done using deductive method of content analysis based on pre-determined categories of factors (personal, family, community and health system). Thereafter, subcategories (subthemes) under major categories were also identified on basis of previously known factors.

FINDINGS

A total of 5581 PLHIV were registered at ART centre of GMC Amritsar between January 1, 2015, to December 31, 2020, whereas a total of 3318 PLHIV were registered at ART centre, GGSMCH, Faridkot. Therefore, 8899 PLHIV were included in the study.

Distribution of study participants:

Sex distribution: Out of the total registered patients for ART, 7064 (79%) were males and 1824 (20.5%) were females. 11 (0,5%) PLHIV on ART were transgender individuals.

Table-1: Gender Distribution of Study Population by the selected ART Centers

Sex/ Gender	GMC Amritsar	GGSMC&H, FDK	Total
Male	4262	2802	7064
Female	1311	513	1824
TG	8	03	11
Total	5581	3318	8899

Typology: Majority of the registered PLHIV at both the ART centres were IDUs (39%) followed by heterosexual (28%) and unknown (18%).

LTFU rate in GMC Amritsar was found to be 24% (1337/5581) whereas it was 9% (302/3318) in GGSMC&H, Faridkot. The overall LTFU rate was 18.4% (1639/8899).

From the in-depth interviews conducted among 120 LTFUs and 120 patients still on treatment the following barriers and enablers were found:

Barriers:

HIV had no cure: Most of the PLHIV who had left treatment said that the main reason to stop medication was that “HIV had no cure”. Taking medication for life would not cure the disease therefore there was no point in taking the medication.

Absence of symptoms: Most of the PLHIV who left the medication reported that they had no symptoms, so why should they take medicine.

Side effects of medications: Most of the PLHIV interviewed said that they felt dizzy and weak after taking medication. Fe halved the dosage but still, they didn't feel better, so they stopped taking medication.

Apathy of health care providers: Majority of the study participants reported that they did not report to the ART centre because the staff was very rude to them especially if they reported late for taking medication.

Waiting time at ART centre: Due to long waiting hours, participants reported they did not come for refill of their medication. Most of the PLHIV interviewed were daily wagers or shopkeepers. They said that the whole day is wasted on the day they come to take the medication because they lose their earnings and they can't afford to miss work. Hence, they think they are better off without the medication.

Travel time and distance: Few of the PLHIV interviewed said that they had to travel a long distance as the ART centre was far away from their residence. Travel cost was also mentioned as one of the reasons for not coming to ART centre for medications.

Stigma and discrimination: Some participants reported that coming to ART centre would make the rest of the people aware of their HIV status and hence they would face discrimination in their day-to-day life. They also feared losing their jobs if someone knew about their status.

Enablers:

Benefits of medication: Majority who were taking medication believed that their symptoms improved after taking medication because of which they were able to carry on the day-to-day activities.

Taking for their family: About half of the PLHIV on medication believed that they had to stay healthy for their family as they were the sole breadwinners. This prompted them to take medication regularly.

Free of cost: Most of the participants said that they were taking medication because it was free of cost and there was no out-of-pocket expenditure. Only travelling cost was the issue but this did not hamper their plans of coming to ART centre.

Facilitation through supportive staff: Few of the participants reported that supportive staff available at the centre helps them to get medication and less time gets wasted.

Easy schedule: Some of the PLHIV reported they had to take medication at night and thought this to be easiest. They said that they took medication just before going off to sleep which was quite convenient for them.

CONCLUSIONS

The main barriers identified towards the continuation of ART were side effects of medicines, waiting time, wage loss, stigma/discrimination attached to the disease, apathy of HCPs, distance of ART centre, and lastly incurable disease. Free drugs, counselling sessions, easy schedules, and improvement in quality of life with medication were a few enablers identified.

RECOMMENDATIONS

Increase the duration for which medication can be given to the patient in one go so that they can save time and repeated visits

Availability of medication at doorstep through CSVs as they are already going for follow-up of LTFU patients

If the above is not feasible, a new community volunteer can be identified like a community DOTS provider

Counselling sessions at each visit so that the PLHIV can be retained at ART centre

Use of mHealth in providing treatment to PLHIV

Increased intersectoral coordination

ACKNOWLEDGEMENTS

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STRATEGIC INFORMATION

Understanding Drivers of HIV Amongst Adult PLHIV in Dimapur

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INTRODUCTION

Human immunodeficiency virus (HIV) and Acquired Immune Deficiency Syndrome (AIDS) have been reported as a major public health problem for decades, with an estimated 38 million people globally living with the infection (Fauk, Karen, Mwanri, and Ward, 2021). The HIV epidemic in India is largely concentrated among key populations. Nagaland ranks third in HIV prevalence in India with 50% of the infected people from Dimapur district (February 2020) in the age group of 15-35 years. This study was conducted to understand the drivers of HIV amongst the adult PLHIV in Dimapur taking into consideration the practice risk behaviours, stigma, and attitudes towards ARV treatment among PLHIV diagnosed during 2017- 2021.

METHODS

A descriptive research design was employed to examine 100 adult PLHIV who had received positive test results between 2017 and 2021 in Dimapur, Nagaland. A systematic random sampling method was used to obtain a representative sample from the total population of 4,091 PLHIV registered between 2016-17 and 2020-2021, consisting of 2,306 male and 1,785 female PLHIV (as of February 2022, per DAPCU records). The study specifically focused on 100 adult PLHIV falling within the age range of 18-50 who had visited the ART centre during the data collection period. The distribution of respondents by age was as follows: 63% were aged 30 and above, 25% were in the 26-29 age group, 10% were in the 22-25 age range, and only 2% were within the 18-21 age group. To gather comprehensive insights, the study interviewed a total of 100 participants, divided equally between 50 female and 50 male respondents. This sample included 10 female and 10 male participants from each year, spanning from 2016-17 to 2020-2021, and employed a semi-structured interview schedule for data collection. Quantitative data analysis was done using SPSS, and qualitative data was sorted according to the pre-categorized concepts and integrated for describing the quantitative data.

FINDINGS

Profile of the respondents:

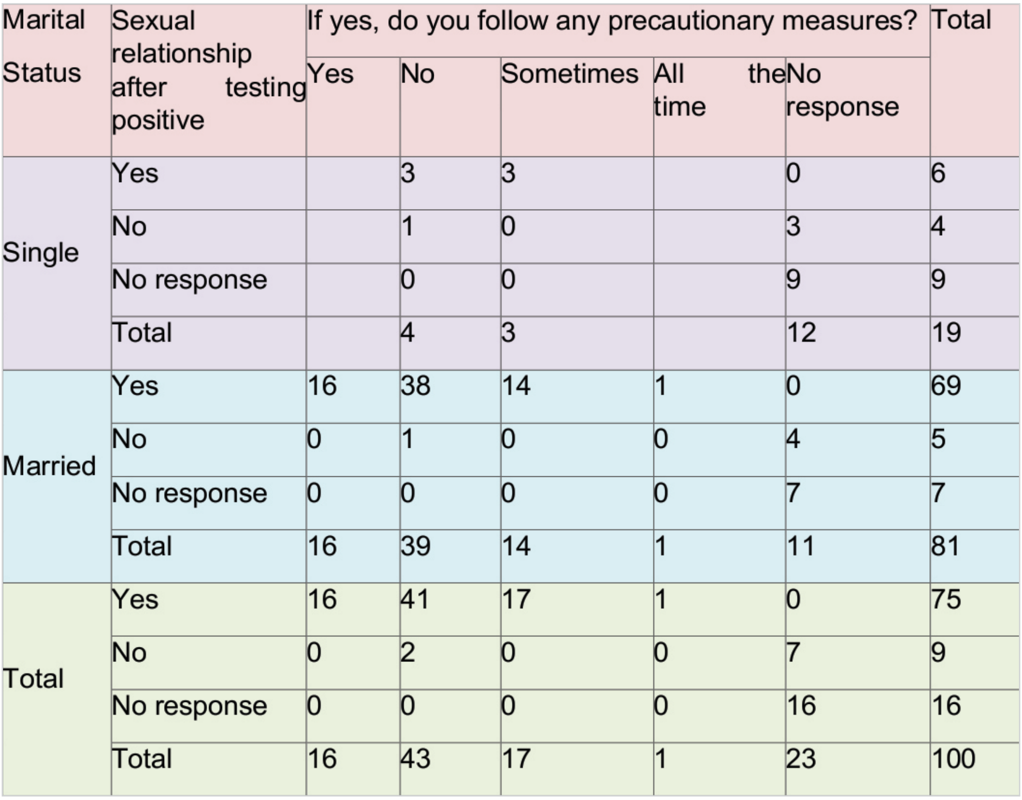
In the study, 100 adult PLHIV were selected. Among the 50 male respondents, 38% fell into the 30 and above age category, while 3.0% were in the 22-25 age bracket. There were no male respondents in the 18-

21 age group. In the case of the 50 female participants, 25% were in the 30 and above age category, and 2% belonged to the 18-21 age group. Of the female participants, 81% were married, while 19% were unmarried. In terms of employment status, 48% of the respondents were not employed, 29% were employed, 7% were self-employed, and 5% worked as daily wage earners.

Drivers and Risk Behaviour Pattern amongst the Adult PLHIV

Out of the 100 respondents, 74% expressed that they were unaware of the drivers of HIV and risky behaviours, such as sharing needles, engaging in unprotected sex, having multiple sexual partners, and substance abuse, leading to HIV infection prior to testing positive for HIV. In contrast, 26% of the respondents indicated that they were aware of these risks. The majority of respondents discovered their HIV-positive status during routine general check-ups prompted by feelings of unwellness.

Table-1: Risky Sexual Behaviour Pattern among the Study Population by their Marital status



Marital Status	Sexual relationship after testing positive	If yes, do you follow any precautionary measures?					Total
		Yes	No	Sometimes	All the time	No response	
Single	Yes		3	3		0	6
	No		1	0		3	4
	No response		0	0		9	9
	Total		4	3		12	19
Married	Yes	16	38	14	1	0	69
	No	0	1	0	0	4	5
	No response	0	0	0	0	7	7
	Total	16	39	14	1	11	81
Total	Yes	16	41	17	1	0	75
	No	0	2	0	0	7	9
	No response	0	0	0	0	16	16
	Total	16	43	17	1	23	100

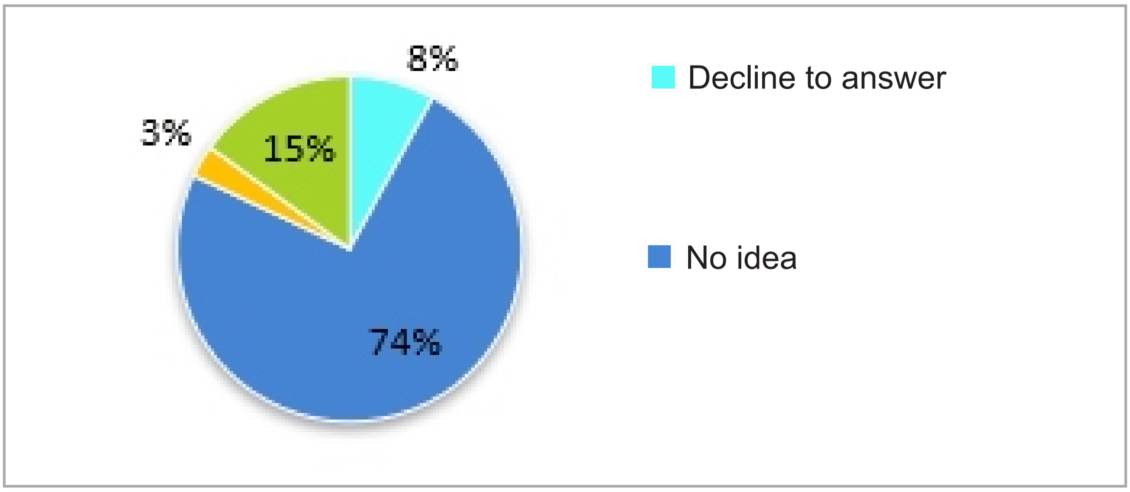
The table presented above provides insights about the 100 adult PLHIV respondents involved in this study. Among this group, 81 individuals were married, while 19 were single. Within the married cohort, 69 respondents reported engaging in sexual relationships after testing positive for HIV. Among these individuals, 38 mentioned that they did not adhere to any precautionary measures, 16 indicated consistent adherence to precautionary measures, and 14 reported occasionally following precautionary measures. Among the single adult PLHIV respondents, 6 individuals acknowledged having sexual relationships, but only 3 mentioned that they occasionally followed precautionary measures, while 3 stated that they did not follow any precautionary measures.

Table-2: Association between HIV Stigma and Treatment Seeking Behaviour among the Study Population

Response		Regular ART treatment		Total
		Yes	No	
Stigma faced during the treatment/medication	Yes	2	0	2
	No	96	2	98
Total		98	2	100

The table provides insights into the relationship between regular ART treatment and the experience of stigma during treatment/medication. Out of 98 adult PLHIV receiving regular ART treatments, 2 of them reported experiencing stigma during their treatment. Out of the 2 respondents who were not receiving regular ART treatment, none reported facing stigma. Therefore, fear of social stigma and discrimination among the respondents generally does not deter individuals from seeking treatment for HIV/ AIDS.

Pie Chart 1 : Ways to prevent spread of HIV to other people



Out of 100 respondents, 74% stated that they do not have any knowledge of how to prevent the spread of HIV. 15% suggested that taking proper medication and being cautious about risky behaviours, such as having unprotected sex, can stop the spread of HIV/AIDS. 3% suggested that HIV-positive people should refrain from donating blood to other patients. 8% declined to answer.

CONCLUSIONS

This study focused on adults living with HIV (PLHIV) who were tested and registered between 2017 and 2021 in Dimapur, Nagaland. Key findings included a significant number of respondents engaging in high-risk sexual behaviours, and limited awareness of HIV risk factors. Condom-less sexual risk behavior among study participants is significant among both married and single status, associated with individual risk perception and access to condoms. In the study, even though stigma didn't appear prevalent within families or at ART centers and most of the respondents disclosed their HIV status to their spouses, they were reluctant to share it with others due to fears of potential discrimination in the broader community.

These findings underscore the need for a sustained commitment of various stakeholders to enhance community awareness and sensitize individuals to the associated risks.

RECOMMENDATIONS

To address HIV transmission among adult PLHIV, several recommendations are proposed. These recommendations aim to comprehensively address HIV transmission and its associated challenges among adult PLHIV.

Firstly, implement targeted educational initiatives focusing on risk awareness and safe sexual practices, enhancing government condom distribution efforts.

Secondly, establish dedicated Family Counseling Centers exclusively for PLHIV, offering safe spaces for open discussions on marital and sexual matters to reduce non-consensual sexual activity without condom use.

Thirdly, destigmatize HIV and its treatment, even in the absence of identified stigma instances, to minimize sexual risk behaviours and enhance ART adherence.

Lastly, recognize the impact of economic factors on risky behaviours and provide economic support alongside healthcare services to ensure medication continuation and improve overall well-being.

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Knowledge and Practices of Contraception among Women Living with HIV in Puducherry

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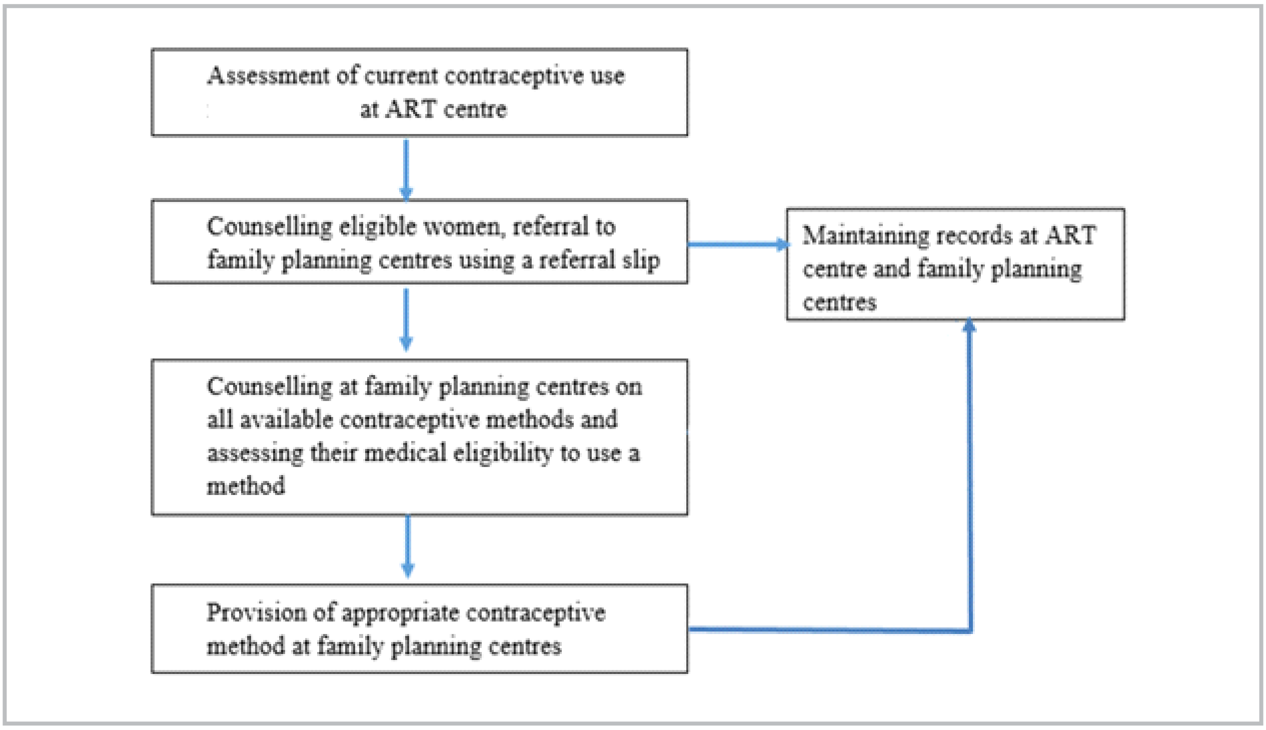
INTRODUCTION

Contraception practices among people living with HIV are a grossly ignored aspect among the services provided under NACP, as the mainstay has always been on preventing and controlling the spread of HIV infection. Lack of awareness about contraception measures and lack of access has led to many unwanted pregnancies in PLHIV which had a poor outcome for both the mother and the child in the long run [1, 2] Earlier evidence showed that HIV-positive people were not routinely informed about the alternative methods of contraception at ART centers except condoms. There was no established referral linkage to family planning services. The study aimed to estimate the knowledge and uses of contraception among women living with HIV (WLHIV) in Puducherry.

METHODS

The study was conducted among WLHIV aged 18-49 years who were registered at IGMC & RI ART centre in Puducherry to assess the knowledge of various contraceptives and to estimate the acceptance of contraceptive practices after linking the participants at the ART center to the family planning services provided by the Department of OBG. The 163 WLHIV were enrolled in the study after the exclusion of menopausal women and those who had undergone hysterectomy or sterilization. Linkage was established after the training of stakeholders. A semi-structured questionnaire was used to assess the knowledge of contraception and sexual practices. A register was maintained for contraceptive services to establish a linkage between the ART centre and OBG department (Fig 1). The proportion of women who were referred to the OBG department, the proportion of those who turned up, and the proportion of those who actually availed of a contraceptive method were analysed.

Figure 1: Flow of participants from ART centre to Family Planning Centre



FINDINGS

Data for those who were already availing of a contraceptive method was obtained before establishing the linkage and assessing the outcome. 163 women were enrolled after considering the exclusion criteria. All the participants knew about the use of condoms, 118 (72%) were sexually active during the time of the study, and 112 (68%) were already using condoms. There was no significant difference between the educational status and occupation among women with HIV infection who were using condoms when compared to women who weren't using condoms.

Linkage services indicators:

Process and Output indicators of total 163 WLHIV:

Number of study participants referred for availing family planning services – 45

Number of study participants who were not willing for family planning services – 35

Number of study participants who availed contraceptive services from OBG department - 3

CONCLUSIONS

Findings showed low uses as well as referrals for family planning services. Hence periodic counseling services should be provided to women when they approach the ART centers so that their misconceptions are cleared, and they make beneficial contraceptive choices to prevent unwanted pregnancies.

RECOMMENDATIONS

Capacity building of the healthcare providers regarding providing family planning services, including periodic training of the healthcare providers for the provision of family planning services.

Improving awareness about family planning services through health promotion.

Qualitative research exploring the social perspectives of women with HIV infection to understand barriers to availing family planning services.

Coordination with the Department of Obstetrics & Gynaecology (OB&G) with the ART centre for effective planning of provision of family planning services. Posting a resident doctor from the Department of Obstetrics & Gynaecology for 2 weeks period in rotation to provide direct services at the ART centre.

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ANNEXURES

Contraceptive Counselling for people living with HIV

COMBINED ORAL CONTRACEPTIVE PILLS (COCs)

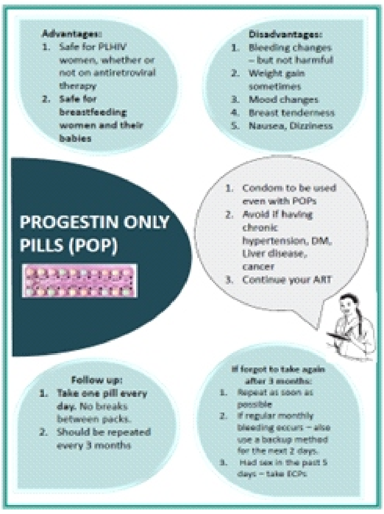
Advantages:
1. Protection against Cancer of the lining of the uterus, Ovarian cancer, Anaemia.
2. Safe for PLHIV women, whether or not on antiretroviral therapy

Disadvantages:
1. Bleeding changes – but not harmful
2. Weight gain
3. Headache, Nausea, dizziness
4. Blood clots in deep veins of legs or lungs

1. Take the pill at same time of the day
2. Condom to be used even with combined oral contraceptive pills
3. Avoid if having chronic hypertension, DM, Liver disease, cancer
4. Continue your ART

Follow up:
1. Usually 28 pills in a pack, monthly
2. Should be reviewed at least every 3 months to check on correct use, clarifying doubts

If forgot to take pills:
1. One/two pills – Take it as soon as possible
2. Three or more pills –
   - i. Finish all hormonal pills in the pack.
   - ii. Throw away the seven nonhormonal pills in a 28-pill pack.
   - iii. Start a new pack the next day. Use a **backup method** for the next seven days.



PROGESTIN ONLY PILLS (POP)

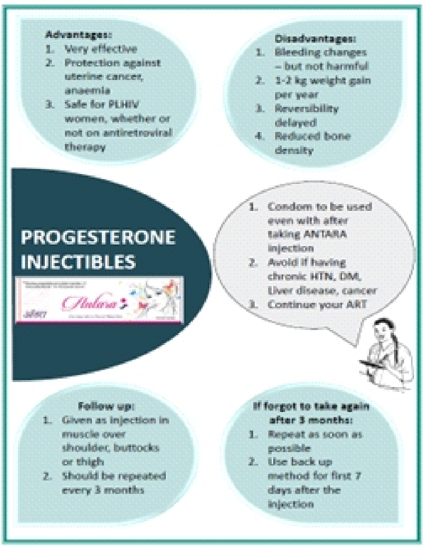
Advantages:
1. Safe for PLHIV women, whether or not on antiretroviral therapy
2. **Safe for breastfeeding women and their babies**

Disadvantages:
1. Bleeding changes – but not harmful
2. Weight gain sometimes
3. Mood changes
4. Breast tenderness
5. Nausea, Dizziness

1. Condom to be used even with POPs
2. Avoid if having chronic hypertension, DM, Liver disease, cancer
3. Continue your ART

Follow up:
1. **Take one pill every day.** No breaks between packs.
2. Should be repeated every 3 months

If forgot to take again after 3 months:
1. Repeat as soon as possible
2. If regular monthly bleeding occurs – also use a backup method for the next 2 days.
3. Had sex in the past 5 days – take ECPs.



PROGESTERONE INJECTIBLES

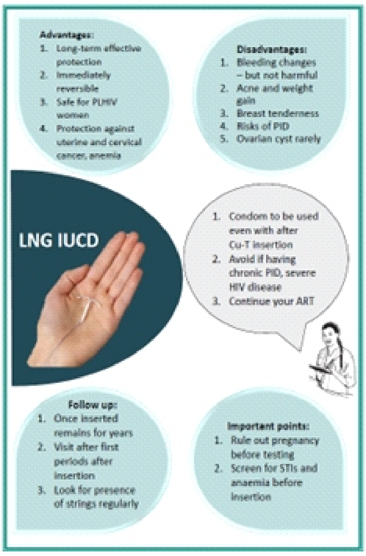
Advantages:
1. Very effective
2. Protection against uterine cancer, anaemia
3. Safe for PLHIV women, whether or not on antiretroviral therapy

Disadvantages:
1. Bleeding changes – but not harmful
2. 1-2 kg weight gain per year
3. Reversibility delayed
4. Reduced bone density

1. Condom to be used even with after taking ANTARA injection
2. Avoid if having chronic HTN, DM, Liver disease, cancer
3. Continue your ART

Follow up:
1. Given as injection in muscle over shoulder, buttocks or thigh
2. Should be repeated every 3 months

If forgot to take again after 3 months:
1. Repeat as soon as possible
2. Use back up method for first 7 days after the injection



LNG IUCD

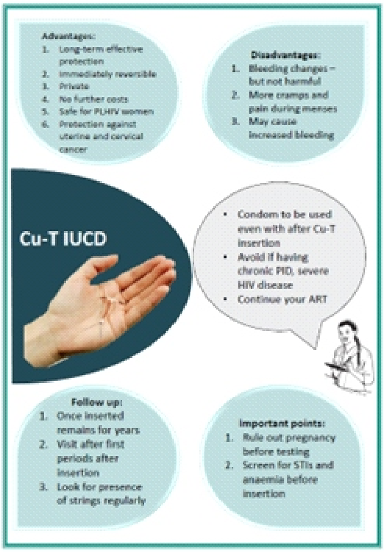
Advantages:
1. Long-term effective protection
2. Immediately reversible
3. Safe for PLHIV women
4. Protection against uterine and cervical cancer, anemia

Disadvantages:
1. Bleeding changes – but not harmful
2. Acne and weight gain
3. Breast tenderness
4. Risks of PID
5. Ovarian cyst rarely

1. Condom to be used even with after Cu-T insertion
2. Avoid if having chronic PID, severe HIV disease
3. Continue your ART

Follow up:
1. Once inserted remains for years
2. Visit after first periods after insertion
3. Look for presence of strings regularly

Important points:
1. Rule out pregnancy before testing
2. Screen for STIs and anaemia before insertion



Cu-T IUCD

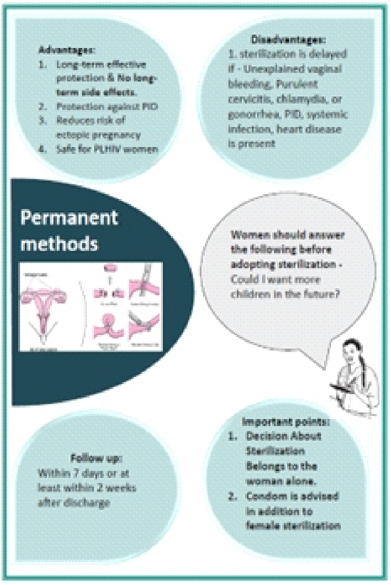
Advantages:
1. Long-term effective protection
2. Immediately reversible
3. Private
4. No further costs
5. Safe for PLHIV women
6. Protection against uterine and cervical cancer

Disadvantages:
1. Bleeding changes – but not harmful
2. More cramps and pain during menses
3. May cause increased bleeding

- Condom to be used even with after Cu-T insertion
- Avoid if having chronic PID, severe HIV disease
- Continue your ART

Follow up:
1. Once inserted remains for years
2. Visit after first periods after insertion
3. Look for presence of strings regularly

Important points:
1. Rule out pregnancy before testing
2. Screen for STIs and anaemia before insertion



Permanent methods

Advantages:
1. Long-term effective protection & **No long-term side effects.**
2. Protection against PID
3. Reduces risk of ectopic pregnancy
4. Safe for PLHIV women

Disadvantages:

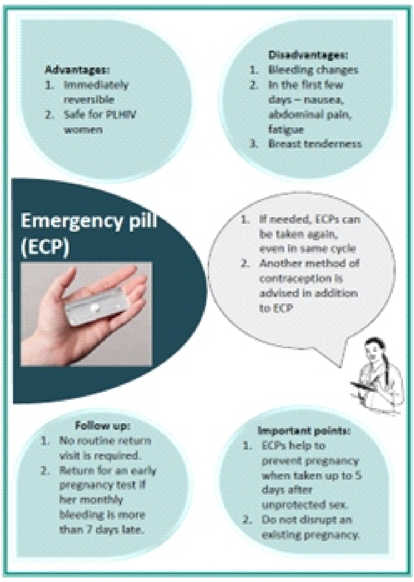
1. sterilization is delayed if - Unexplained vaginal bleeding, Purulent cervicitis, chlamydia, or gonorrhea, PID, systemic infection, heart disease is present

Women should answer the following before adopting sterilization - Could I want more children in the future?

Follow up:

Within 7 days or at least within 2 weeks after discharge

Important points:
1. **Decision About Sterilization Belongs to the woman alone.**
2. **Condom is advised in addition to female sterilization**



Emergency pill (ECP)

Advantages:
1. Immediately reversible
2. Safe for PLHIV women

Disadvantages:
1. Bleeding changes
2. In the first few days – nausea, abdominal pain, fatigue
3. Breast tenderness

1. If needed, ECPs can be taken again, even in same cycle
2. Another method of contraception is advised in addition to ECP

Follow up:
1. No routine return visit is required.
2. Return for an early pregnancy test if her monthly bleeding is more than 7 days late.

Important points:
1. ECPs help to prevent pregnancy when taken up to 5 days after unprotected sex.
2. Do not disrupt an existing pregnancy.

For any information on the study, kindly contact Dr. Ruben Raj, JIPMER, Puducherry at_rubenraj4418@gmail.com and for this brief in the Compendium, Mr. T. Balamurugan, AD-Strategic Information, Pondicherry AIDS Control Society at pondicherrysacs@gmail.com

Uptake and Impact of COVID-19 Vaccination Among High-Risk Groups: An Observational Study from Tamil Nadu, India

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INTRODUCTION

COVID-19 vaccination is recommended as an effective way to manage the pandemic. Multiple COVID-19 vaccines have been introduced across the world with varying efficacy and effectiveness against the novel virus. Globally, it has been estimated that 14.4 million deaths have been averted due to the COVID-19 vaccines. While all these vaccines are being recommended for adults, as well as paediatric age groups, the safety profile of the vaccines, short-term, and long-term, are under study.

In India, the High-Risk Groups (HRGs) for HIV infection, comprise Female Sex Workers (FSWs), men who have sex with men (MSM), Transgender Individuals (TG), and Intravenous Drug Users (IDUs). They are in general a marginalized population, which impacts their accessibility and availability of social and health care services. The COVID-19 pandemic impacted the whole world, with already marginalized populations being the most affected groups. Within the HRGs, TG and MSM adults are further marginalized as sexual minorities, and the taboos associated with the practice in countries like India. Considering the higher severity of COVID-19 infections, vaccine coverage for these populations is essential. When COVID-19 vaccination was introduced, these HIV HRGs might have had trust issues towards the vaccine and the health system providing it, based on a historical perspective.

Most of the trans adults expressed their willingness to receive COVID-19 vaccines, while the barriers to accessing the vaccines have been highlighted. Hence, it is of vital importance that vaccine uptake among these populations must be studied to identify the determinants and potential gaps in the provision and coverage of the services.

Although studies on the vaccine uptake rates among the general population have been done in India, no studies could be found among the HRGs. Hence, we conducted the following study to assess the COVID-19 vaccine uptake among the HRGs for HIV in Tamil Nadu, India, and to determine the AEFIs (Adverse Effects Following Immunization) and breakthrough infections, among the vaccinated.

METHODS

This study was an observational, retrospective cohort study. The study population included HRGs enrolled under the Tamil Nadu AIDS Control Society (TANSACS). HRGs are TG individuals, transsexuals (TS), MSM, and FSWs.

Study settings: Tamil Nadu, India. The state of Tamil Nadu has a population of 6.8 crores. The state is divided into 38 administrative districts, there are around 83,681 HRGs under the 85 Targeted Intervention (TIs) clusters of TANSACS, across these 38 districts. Among the HRGs, 45,367 FSWs, 5,607 transgender individuals, 397 and 32,310 MSM are registered. The HRGs avail services from the ICTCs, ART centers and the TIs, delivered through the outreach services and NGOs. HRGs less than 18 years old and those who did not give written informed consent were excluded.

Sample size, sampling technique, and data collection: Among 85 TIs, 41 clusters from 31 districts have expressed their willingness to participate in the study. Ten HRG participants from each cluster were included in the study by consecutive sampling. One large cluster provided 20 participants. Breakthrough infections were probed according to the definitions in the literature (COVID-19 infection 21 days after 1st dose, and infections 14 days after the 2nd dose). Ethical permission for the research was obtained from the Institute Ethics Committee of the Government Medical College, Dindigul. Approval from the Research Review Committee of TANSACS for conducting the study was also obtained.

Data analysis was carried out in IBM SPSS 26.0. COVID-19 vaccine uptake, AEFIs, and breakthrough infection are reported in proportions. Univariate analysis to test the association of socio-demographic with vaccine uptake, AEFIs, and breakthrough infections was conducted. Odds ratio with 95% confidence intervals (C.I) was calculated. Adjusted analysis was conducted by logic regression. Factors that had a p-value of 0.1 were included in the adjusted analysis. A p-value of 0.05 was considered statistically significant.

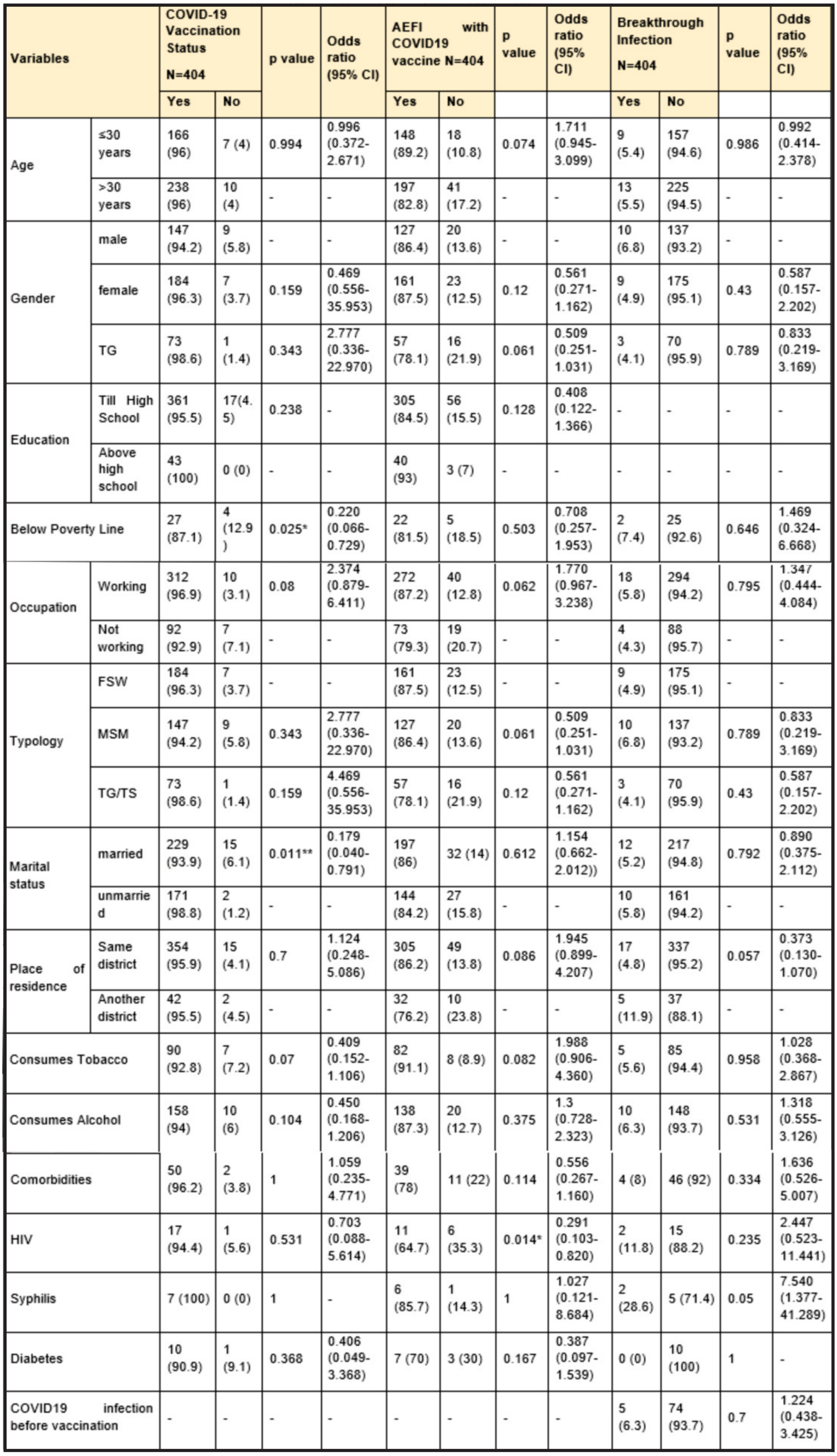
FINDINGS

In terms of the type of HRG, 45.4% were FSWs, 37.1% were MSM, 16.2% were TGs and 1.4% were TS. Most of the study participants were females (45.4%), aged 31-40 years (51.3%). Primary school educated (78.4%), employed (76.5%), above the poverty line (92.5%), and married (58%). Among 12.4% who reported co-morbidities, 4.3% had HIV and 2.9% had syphilis or other STIs. The HRG population reported that 19.5% of them had a history of COVID-19 infection before vaccination.

The COVID-19 vaccine uptake among the HRGs for HIV is 96%. Among the HRGs, TG/TS group had the highest uptake of 98.6%, followed by FSW (96.3%) and MSM (94.2%). Univariate analysis revealed that a significant association of individuals below the poverty line and married individuals with COVID-19 vaccine uptake was present, while after the adjusted analysis, only marital status was significantly associated with vaccine uptake having a p-value of less than 0.05.

Most of the study participants had completed the two-dose schedule (90.1%). AEFIs were reported among 85.4% of the participants after the COVID-19 vaccination (after one or more doses). Fever (49.5%), followed by myalgia (48.8%) were the most common AEFIs reported. None of them had any serious AEFIs. HIV-positive status was significantly associated with the incidence of AEFI with COVID-19 vaccines.

Table 1: Association between the socio-demographic characters and the COVID-19 breakthrough infections



Variables		COVID-19 Vaccination Status N=404		p value	Odds ratio (95% CI)	AEFI with COVID19 vaccine N=404		p value	Odds ratio (95% CI)	Breakthrough Infection N=404		p value	Odds ratio (95% CI)
		Yes	No			Yes	No			Yes	No		
Age	≤30 years	166 (96)	7 (4)	0.994	0.996 (0.372-2.671)	148 (89.2)	18 (10.8)	0.074	1.711 (0.945-3.099)	9 (5.4)	157 (94.6)	0.986	0.992 (0.414-2.378)
	>30 years	238 (96)	10 (4)	-	-	197 (82.8)	41 (17.2)	-	-	13 (5.5)	225 (94.5)	-	-
Gender	male	147 (94.2)	9 (5.8)	-	-	127 (86.4)	20 (13.6)	-	-	10 (6.8)	137 (93.2)	-	-
	female	184 (96.3)	7 (3.7)	0.159	0.469 (0.556-35.953)	161 (87.5)	23 (12.5)	0.12	0.561 (0.271-1.162)	9 (4.9)	175 (95.1)	0.43	0.587 (0.157-2.202)
	TG	73 (98.6)	1 (1.4)	0.343	2.777 (0.336-22.970)	57 (78.1)	16 (21.9)	0.061	0.509 (0.251-1.031)	3 (4.1)	70 (95.9)	0.789	0.833 (0.219-3.169)
Education	Till High School	361 (95.5)	17(4.5)	0.238	-	305 (84.5)	56 (15.5)	0.128	0.408 (0.122-1.366)	-	-	-	-
	Above high school	43 (100)	0 (0)	-	-	40 (93)	3 (7)	-	-	-	-	-	-
Below Poverty Line		27 (87.1)	4 (12.9)	0.025*	0.220 (0.066-0.729)	22 (81.5)	5 (18.5)	0.503	0.708 (0.257-1.953)	2 (7.4)	25 (92.6)	0.646	1.469 (0.324-6.668)
Occupation	Working	312 (96.9)	10 (3.1)	0.08	2.374 (0.879-6.411)	272 (87.2)	40 (12.8)	0.062	1.770 (0.967-3.238)	18 (5.8)	294 (94.2)	0.795	1.347 (0.444-4.084)
	Not working	92 (92.9)	7 (7.1)	-	-	73 (79.3)	19 (20.7)	-	-	4 (4.3)	88 (95.7)	-	-
Typology	FSW	184 (96.3)	7 (3.7)	-	-	161 (87.5)	23 (12.5)	-	-	9 (4.9)	175 (95.1)	-	-
	MSM	147 (94.2)	9 (5.8)	0.343	2.777 (0.336-22.970)	127 (86.4)	20 (13.6)	0.061	0.509 (0.251-1.031)	10 (6.8)	137 (93.2)	0.789	0.833 (0.219-3.169)
	TG/TS	73 (98.6)	1 (1.4)	0.159	4.469 (0.556-35.953)	57 (78.1)	16 (21.9)	0.12	0.561 (0.271-1.162)	3 (4.1)	70 (95.9)	0.43	0.587 (0.157-2.202)
Marital status	married	229 (93.9)	15 (6.1)	0.011**	0.179 (0.040-0.791)	197 (86)	32 (14)	0.612	1.154 (0.662-2.012))	12 (5.2)	217 (94.8)	0.792	0.890 (0.375-2.112)
	unmarried	171 (98.8)	2 (1.2)	-	-	144 (84.2)	27 (15.8)	-	-	10 (5.8)	161 (94.2)	-	-
Place of residence	Same district	354 (95.9)	15 (4.1)	0.7	1.124 (0.248-5.086)	305 (86.2)	49 (13.8)	0.086	1.945 (0.899-4.207)	17 (4.8)	337 (95.2)	0.057	0.373 (0.130-1.070)
	Another district	42 (95.5)	2 (4.5)	-	-	32 (76.2)	10 (23.8)	-	-	5 (11.9)	37 (88.1)	-	-
Consumes Tobacco		90 (92.8)	7 (7.2)	0.07	0.409 (0.152-1.106)	82 (91.1)	8 (8.9)	0.082	1.988 (0.906-4.360)	5 (5.6)	85 (94.4)	0.958	1.028 (0.368-2.867)
Consumes Alcohol		158 (94)	10 (6)	0.104	0.450 (0.168-1.206)	138 (87.3)	20 (12.7)	0.375	1.3 (0.728-2.323)	10 (6.3)	148 (93.7)	0.531	1.318 (0.555-3.126)
Comorbidities		50 (96.2)	2 (3.8)	1	1.059 (0.235-4.771)	39 (78)	11 (22)	0.114	0.556 (0.267-1.160)	4 (8)	46 (92)	0.334	1.636 (0.526-5.007)
HIV		17 (94.4)	1 (5.6)	0.531	0.703 (0.088-5.614)	11 (64.7)	6 (35.3)	0.014*	0.291 (0.103-0.820)	2 (11.8)	15 (88.2)	0.235	2.447 (0.523-11.441)
Syphilis		7 (100)	0 (0)	1	-	6 (85.7)	1 (14.3)	1	1.027 (0.121-8.684)	2 (28.6)	5 (71.4)	0.05	7.540 (1.377-41.289)
Diabetes		10 (90.9)	1 (9.1)	0.368	0.406 (0.049-3.368)	7 (70)	3 (30)	0.167	0.387 (0.097-1.539)	0 (0)	10 (100)	1	-
COVID19 infection before vaccination		-	-	-	-	-	-	-	-	5 (6.3)	74 (93.7)	0.7	1.224 (0.438-3.425)

The breakthrough infection rate was 5.4% among the vaccinated participants. Most breakthrough infections were mild (90.9%), while one patient had a severe infection requiring mechanical ventilation. None of the factors had a significant association with the breakthrough infection.

The spouses of the married HRGs might have had the positive motivation to take the vaccination, resulting in significantly higher uptake than the unmarried persons. It has been reported that most couples share common health behaviours that can influence each other, including the COVID-19 vaccine uptake.

CONCLUSIONS

Study findings highlight high COVID-19 vaccine uptake among High-Risk Groups (HRGs) in Tamil Nadu, India, with the caveat that AEFIs are more prevalent in this specific population. Analysis also showed a significant association of poverty and marital status with COVID-19 vaccine uptake, while after the adjusted analysis, only marital status was significantly associated with vaccine uptake.

RECOMMENDATIONS

To maximize the impact of COVID-19 vaccination among HIV High-Risk Groups in Tamil Nadu, India, and to address the reported challenges, several key recommendations should be considered. First, sustain and enhance the monitoring and support of high vaccine uptake, ensuring continued accessibility and awareness among these groups. Second, strengthen the surveillance and management of AEFIs by training healthcare providers and raising public awareness about AEFIs. Third, conduct in-depth studies to identify and replicate the factors that have facilitated high vaccine uptake in this population, which can inform targeted strategies elsewhere. Fourth, prioritize equitable vaccine distribution to underserved areas and high-risk populations, addressing disparities in access. Finally, engage in international cooperation to support global vaccination efforts, including technology transfer and vaccine donations, recognizing the broader impact of these initiatives in controlling the pandemic.

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Quality of Life Among PLHIV Enrolled Under TANSACS During COVID-19 Era – A Mixed Method Study

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INTRODUCTION

COVID-19 has affected more than 44 million people in India. The disease spread over the nation for several years after the first confirmed case on January 30, 2020. The pandemic has presented numerous challenges to people living with HIV (PLHIV), who are already living with a chronic illness and may face additional barriers to healthcare and social support. Individuals having health-related problems, including people living with HIV/AIDS were particularly at risk. This is due to the fact that respiratory infections such as Pneumocystis pneumonia, tuberculosis, cryptococcosis, etc. are the most prevalent illnesses in HIV-positive people.

According to WHO, a person's assessment of their place in life in relation to their objectives, expectations, standards, and concerns, as well as the culture and value systems in which they live, is referred to as their quality of life. Quality of life is a complex and multifaceted concept that encompasses physical, mental, and social well-being. It is influenced by a wide range of factors, including access to healthcare, social support, economic stability, and mental health status. In the context of the COVID-19 pandemic, PLHIV may face additional challenges in these areas, such as disruptions to healthcare services, economic instability, and social isolation.

In addition, economic stability is a crucial factor that affects the quality of life of PLHIV. The pandemic has resulted in widespread economic disruptions, including job losses and financial insecurity, which can be particularly challenging for people living with chronic illnesses.

Mental health is another area of concern, as the pandemic has resulted in increased stress and anxiety for many people, including PLHIV. The isolation and uncertainty caused by the pandemic can exacerbate existing mental health issues and contribute to new mental health problems.

This study was conducted to assess the quality of life of people living with HIV during the COVID-19 pandemic which would have caused substantial difficulties for such individuals.

METHODS

A Mixed Method Study was used for this study, and it was conducted at the Government Karur Medical College Hospital. The study period was from January 2022 to July 2022. Study Population selected were the people living with HIV (PLHIV). Sampling method used was line-listed PLHIVs who were taken from high-prevalent districts and were chosen randomly. Through PPS method a total of 400 samples have been taken from the high-prevalent districts.

Data was collected using WHOQOL-BREF SCALE and FGD. The Semi-Structured Questionnaire (WHO QOL BREF SCALE) was administered to the participants by an interview schedule. The questionnaire was designed and translated into the local language and retranslated to assess the content validity. Focus Group Discussion was completed.

Inclusion Criteria: People living with HIV enrolled at Government Karur Medical College Hospital under NACP

Exclusion Criteria: Those who refused to give consent to the study

Ethical Approval: The study protocol was presented in the Institutional Ethics Committee of Karur Medical College.

The data was entered in MS Excel and analysed using SPSS Version 16. An appropriate summary of data and inferential statistics was used to analyse the data. Appropriate tests of significance were completed.

FINDINGS

Out of the 400 samples that were taken, people who are 41 years and older occupy 72.25% (N – 291) of the entire sample and the minority of the sample are less than 20 years of age group who occupy 3.25% (N-13). The sample also included the age group of 21-30 (7.75%: N-31) and the age group of 31-40 (16.25%: N-65).

Table 1: The majority of people in all age categories are in poor physical states. Both men 25.5% (N-102) and women 40.75% (N-163) have poor physical health, whereas women have worse physical health. The physical condition of transgender people 0.75% (N-3) is often good. Most individuals who smoke (62%: N-248) also have poor quality physical health. For most of the sample, individuals not infected also have a poor quality of physical health. Most of the sample did not suffer from any unrelated illnesses, yet they had a poor quality of physical health 58.25% (N-233).

There are more individuals who have a good psychological state and consume tobacco (10.5%: N-42) than there are individuals who do not consume tobacco and have a poor psychological state (4.75%: N-19). However, this is swapped for individuals who consume alcohol. The number of people who consume alcohol and have poor psychological health (5.25%: N-21) is lower than the number of people who do not consume alcohol and have a good psychological state (10.25%: N-41). There is an equal number of people who have unrelated illnesses with poor mental state, and those who do not have any such illness and have a good mental state 10.25% (N-41) each.

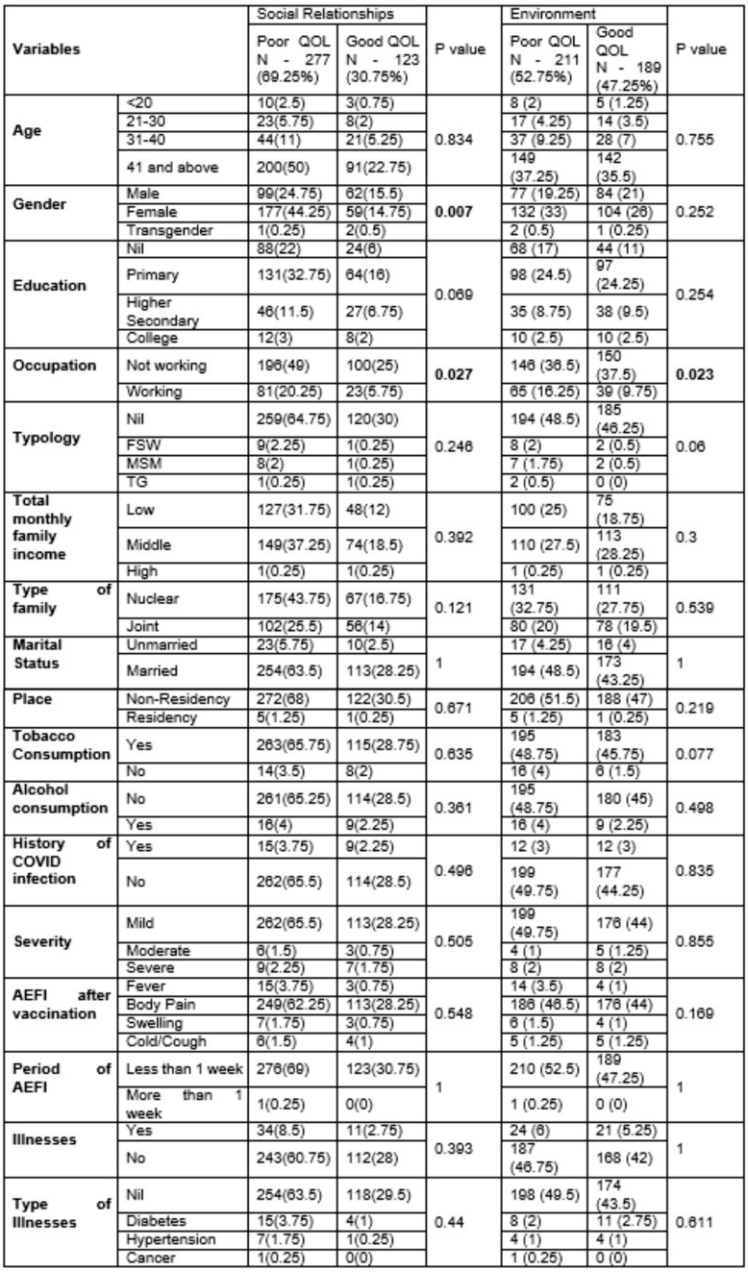
Table 1 - Association between demographic variables and Physical Health and Psychological

Variables		Physical Health		P value	Psychological		P value
		Poor QOL 265 (66.25%)	Good QOL 135 (33.75%)		Poor QOL N - 355 (88.75%)	Good QOL N - 45 (11.25%)	
Age	<20	8(2)	5(1.25)	0.972	12(3)	1(0.25)	0.508
	21-30	20(5)	11(2.75)		25(6.25)	6(1.5)	
	31-40	44(11)	21(5.25)		58(14.5)	7(1.75)	
	41 and above	193(48.25)	98(24.5)		260(65)	31(7.75)	
Gender	Male	102(25.5)	59(14.75)	**0.026**	141(35.25)	20(5)	0.375
	Female	163(40.75)	73(18.25)		212(53)	24(6)	
	Transgender	0(0)	3(0.75)		2(0.5)	1(0.25)	
Education	Nil	81(20.25)	31(7.75)	0.428	99(24.75)	13(3.25)	0.557
	Primary	126(31.5)	69(17.25)		176(44)	19(4.75)	
	Higher Secondary	46(11.5)	27(6.75)		64(16)	9(2.25)	
	College	12(3)	8(2)		16(4)	4(1)	
Occupation	Not working	187(46.75)	109(27.25)	**0.03**	257(64.25)	39(9.75)	**0.046**
	Working	78(19.5)	26(6.5)		98(24.5)	6(1.5)	
Typology	Nil	249(62.25)	130(32.5)	0.076	335(83.75)	44(11)	0.141
	FSW	8(2)	2(0.5)		10(2.5)	0(0)	
	MSM	8(2)	1(0.25)		9(2.25)	0(0)	
	TG	0(0)	2(0.5)		1(0.25)	1(0.25)	
Total monthly family income	Low	119(29.75)	56(14)	0.731	155(38.75)	20(5)	0.878
	Middle	145(36.25)	78(19.5)		198(49.5)	25(6.25)	
	High	1(0.25)	1(0.25)		2(0.5)	0(0)	
Type of family	Nuclear	158(39.5)	84(21)	0.666	212(53)	30(7.5)	0.421
	Joint	107(26.75)	51(12.75)		143(35.75)	15(3.75)	
Marital Status	Unmarried	18(4.5)	15(3.75)	0.178	28(7)	5(1.25)	0.399
	Married	247(61.75)	120(30)		327(81.75)	40(10)	
Place	Non-Residency	262(65.5)	132(33)	0.41	350(87.5)	44(11)	0.514
	Residency	3(0.75)	3(0.75)		5(1.25)	1(0.25)	
Tobacco Consumption	Yes	248(62)	130(32.5)	0.355	336(84)	42(10.5)	0.726
	No	17(4.25)	5(1.25)		19(4.75)	3(0.75)	
Alcohol consumption	No	247(61.75)	128(32)	0.274	334(83.5)	41(10.25)	0.332
	Yes	18(4.5)	7(1.75)		21(5.25)	4(1)	
History of COVID infection	Yes	14	10(2.5)	0.384	22(5.5)	2(0.5)	1
	No	251(62.75)	125(31.25)		333(83.25)	43(10.75)	
Severity	Mild	251(62.75)	124(31)	0.374	333(83.25)	42(10.5)	0.476
	Moderate	6(1.5)	3(0.75)		7(1.75)	2(0.5)	
	Severe	8(2)	8(2)		15(3.75)	1(0.25)	
AEFI after vaccination	Fever	15(3.75)	3(0.75)	0.443	18(4.5)	0(0)	0.282
	Body Pain	237(59.25)	125(31.25)		321(80.25)	41(10.25)	
	Swelling	7(1.75)	3(0.75)		8(2)	2(0.5)	
	Cold/Cough	6(1.5)	4(1)		8(2)	2(0.5)	
Period of AEFI	Less than 1 week	264(66)	135(33.75)	1	354(88.5)	45(11.25)	1
	More than 1 week	1(0.25)	0(0)		1(0.25)	0(0)	
Illnesses	Yes	32(8)	13(3.25)	0.508	41(10.25)	4(1)	0.803
	No	233(58.25)	122(30.5)		314(78.5)	41(10.25)	
Type of Illnesses	Nil	245(61.25)	127(31.75)	0.838	330(82.5)	42(10.5)	0.675
	Diabetes	13(3.25)	6(1.5)		16(4)	3(0.75)	
	Hypertension	6(1.5)	2(0.5)		8(2)	0(0)	
	Cancer	1(0.25)	0(0)		1(0.25)	0(0)	

Table 2: Most people, regardless of age group, have poor social connections. Both men (24.75%: N-99) and women (44.25%: N-177) also have poor social relationships.A substantial association between gender and social relationships is shown by a p-value of 0.007. No matter their level of education, most participants have poor social relationships. Most of the group reported poor social status (60.75%: N-243) despite not having any linked disorders.

There is a higher frequency of people having a good environment and no employment (37.5%: N-150) compared to those who have a good environment and are working (9.75%: N-39). The employment status and environment domain are also significantly associated with a p-value of 0.023. There are slightly greater numbers of individuals in the middle-income group (27.5%: N-110) which have a poor environment compared to other income groups, whereas there is nearly equal number of participants in good and poor environments. There is a similar frequency of people with illness having poor and good environments. From which, there is an equal number of people having hypertension having good and poor environment. The most prevalent illness is diabetes 4.75% (N-19).

Table 2 - Association between demographic variables and Social Relationships and Environment



Variables		Social Relationships		P value	Environment		P value
		Poor QOL N - 277 (69.25%)	Good QOL N - 123 (30.75%)		Poor QOL N - 211 (52.75%)	Good QOL N - 189 (47.25%)	
Age	<20	10(2.5)	3(0.75)	0.834	8 (2)	5 (1.25)	0.755
	21-30	23(5.75)	8(2)		17 (4.25)	14 (3.5)	
	31-40	44(11)	21(5.25)		37 (9.25)	28 (7)	
	41 and above	200(50)	91(22.75)		149 (37.25)	142 (35.5)	
Gender	Male	99(24.75)	62(15.5)	**0.007**	77 (19.25)	84 (21)	0.252
	Female	177(44.25)	59(14.75)		132 (33)	104 (26)	
	Transgender	1(0.25)	2(0.5)		2 (0.5)	1 (0.25)	
Education	Nil	88(22)	24(6)	0.069	68 (17)	44 (11)	0.254
	Primary	131(32.75)	64(16)		98 (24.5)	97 (24.25)	
	Higher Secondary	46(11.5)	27(6.75)		35 (8.75)	38 (9.5)	
	College	12(3)	8(2)		10 (2.5)	10 (2.5)	
Occupation	Not working	196(49)	100(25)	**0.027**	146 (36.5)	150 (37.5)	**0.023**
	Working	81(20.25)	23(5.75)		65 (16.25)	39 (9.75)	
Typology	Nil	259(64.75)	120(30)	0.246	194 (48.5)	185 (46.25)	0.06
	FSW	9(2.25)	1(0.25)		8 (2)	2 (0.5)	
	MSM	8(2)	1(0.25)		7 (1.75)	2 (0.5)	
	TG	1(0.25)	1(0.25)		2 (0.5)	0 (0)	
Total monthly family income	Low	127(31.75)	48(12)	0.392	100 (25)	75 (18.75)	0.3
	Middle	149(37.25)	74(18.5)		110 (27.5)	113 (28.25)	
	High	1(0.25)	1(0.25)		1 (0.25)	1 (0.25)	
Type of family	Nuclear	175(43.75)	67(16.75)	0.121	131 (32.75)	111 (27.75)	0.539
	Joint	102(25.5)	56(14)		80 (20)	78 (19.5)	
Marital Status	Unmarried	23(5.75)	10(2.5)	1	17 (4.25)	16 (4)	1
	Married	254(63.5)	113(28.25)		194 (48.5)	173 (43.25)	
Place	Non-Residency	272(68)	122(30.5)	0.671	206 (51.5)	188 (47)	0.219
	Residency	5(1.25)	1(0.25)		5 (1.25)	1 (0.25)	
Tobacco Consumption	Yes	263(65.75)	115(28.75)	0.635	195 (48.75)	183 (45.75)	0.077
	No	14(3.5)	8(2)		16 (4)	6 (1.5)	
Alcohol consumption	No	261(65.25)	114(28.5)	0.361	195 (48.75)	180 (45)	0.498
	Yes	16(4)	9(2.25)		16 (4)	9 (2.25)	
History of COVID infection	Yes	15(3.75)	9(2.25)	0.496	12 (3)	12 (3)	0.835
	No	262(65.5)	114(28.5)		199 (49.75)	177 (44.25)	
Severity	Mild	262(65.5)	113(28.25)	0.505	199 (49.75)	176 (44)	0.855
	Moderate	6(1.5)	3(0.75)		4 (1)	5 (1.25)	
	Severe	9(2.25)	7(1.75)		8 (2)	8 (2)	
AEFI after vaccination	Fever	15(3.75)	3(0.75)	0.548	14 (3.5)	4 (1)	0.169
	Body Pain	249(62.25)	113(28.25)		186 (46.5)	176 (44)	
	Swelling	7(1.75)	3(0.75)		6 (1.5)	4 (1)	
	Cold/Cough	6(1.5)	4(1)		5 (1.25)	5 (1.25)	
Period of AEFI	Less than 1 week	276(69)	123(30.75)	1	210 (52.5)	189 (47.25)	1
	More than 1 week	1(0.25)	0(0)		1 (0.25)	0 (0)	
Illnesses	Yes	34(8.5)	11(2.75)	0.393	24 (6)	21 (5.25)	1
	No	243(60.75)	112(28)		187 (46.75)	168 (42)	
Type of Illnesses	Nil	254(63.5)	118(29.5)	0.44	198 (49.5)	174 (43.5)	0.611
	Diabetes	15(3.75)	4(1)		8 (2)	11 (2.75)	
	Hypertension	7(1.75)	1(0.25)		4 (1)	4 (1)	
	Cancer	1(0.25)	0(0)		1 (0.25)	0 (0)	

CONCLUSIONS

The COVID-19 pandemic brought substantial changes to the lives of people living with HIV (PLHIV). Before the pandemic, healthcare access was relatively stable for PLHIV. However, COVID-19 disrupted healthcare systems, leading to reduced access to HIV testing, treatment, and care. Pre-COVID, social support networks were more robust, but social distancing measures during the pandemic created isolation and loneliness. Stigma towards PLHIV worsened in the COVID-19 era due to heightened fear and misinformation, negatively affecting their psychological well-being. Notably, environmental health improved during COVID-19, potentially due to safety measures.

These changes underscore the significant impact of the pandemic on PLHIV's lives. Efforts to support PLHIV, including telemedicine and virtual support groups, have adapted to the new normal. Advocacy against pandemic-related stigma is ongoing. In this evolving landscape, it remains essential to ensure that PLHIV receive the care and support they need to manage their condition effectively and improve their overall quality of life as we move forward beyond COVID-19.

RECOMMENDATIONS

To enhance the quality of life for people living with HIV (PLHIV) in a post-COVID era, we recommend prioritizing telemedicine and virtual support services to maintain healthcare access. These technologies have proven vital during crises and should remain accessible. Furthermore, comprehensive public awareness campaigns should be sustained to combat stigma and misinformation surrounding HIV and COVID-19. Mental health support and counseling services should be readily available to address the psychological impact of isolation and stigma. Economic assistance for PLHIV who experienced financial setbacks during the pandemic is essential, and efforts should focus on maintaining stable income sources. Lastly, continued patient-centred care models and community engagement can ensure tailored support and advocacy for PLHIV, securing their well-being as we navigate the evolving landscape beyond the pandemic.

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Study on Immunisation Status and its Predictors among HIV-exposed and HIV-infected Children in the High and Moderate Priority Districts of West Bengal

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INTRODUCTION

Studies across different countries have reported lower immunization coverage of HIV-infected children compared to uninfected peers [1-6]. Although India has a strong routine immunization reporting system, disaggregated data for HIV-exposed and HIV-infected children is largely unknown. Therefore, this study was planned with the objectives to assess the immunization status of HIV-exposed and HIV-infected children and to identify the variables associated with age-appropriate immunization status.

METHODS

This was a descriptive cross-sectional study. HIV-exposed children aged 12-60 months, whose parents resided in any of the selected high (North and South 24 Parganas) or moderate (Nadia and Murshidabad) priority districts of West Bengal, were included in this study. The sample size for the study was 131, target recruitment for each of the districts was 35 (±10) children. A centralized data collection site was pre-decided for each district by consulting with the coordinating CBOs. Data was collected using a predesigned questionnaire and immunization (mother and child protection cards) cards were checked to ascertain the immunization status of children. Sick children, children lacking documents of immunization, and those who did not turn up at the study sites for data collection were excluded. Data were collected between November 2022 to March 2023. All analysis was performed on SPSS version 19 (IBM SPSS Statistics for Windows, Version 19.0. Armonk, NY: IBM Corp.). The descriptive statistics were calculated and Chi-square test was used to test the significance of associations. Only the variables found significant by bivariate analysis were included in the multivariable regression analysis.

FINDINGS

A total of 131 children were included in the study. Mean age of children was 35.5 (±15.7) months. Among the participants, 18 (13.7%) children were seropositive for HIV infection. The proportion of fully immunized, completely immunized, drop out, and left out was 22.2%, 61.8%, 14.5% and 1.5% respectively. Around 68% of children received the vaccine for Hepatitis B at birth. It was found that 1 out of every 4 children for both age groups (12-23 months and 24-60 months) did not complete their vaccination schedule on time. Timely completion for the primary series was quite low in Murshidabad, while that for the boosters was low in South 24 Parganas. About 15% of parents/guardians reported being stigmatized by healthcare providers which had a significant association with adequate immunization after adjusting for other factors.

CONCLUSIONS

Children born of HIV-infected women in West Bengal have lower vaccination coverage compared to their peers (when compared with NFHS-5) in three of the four studied districts. Facing stigma while seeking immunization services, incomplete documentation of the vaccination process, lack of sensitization of manpower involved in HIV control about childhood immunizations, and possible misconceptions of immunization providers on vaccinating HIV- exposed children are the likely reasons for lower immunization coverage.

RECOMMENDATIONS

Training of HIV field workers on the National Immunization Schedule and correct documentation of vaccination is urgently required. The gap in universal implementation of Hep- B vaccination at birth needs to be closed. Immunization status of HIV-exposed children should be recorded at the contact points for early infant diagnosis.

ACKNOWLEDGMENTS

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Factors Influencing the HIV infection in Selected High Priority, Moderate Priority and Low Priority Districts in Karnataka- An Exploratory Study

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INTRODUCTION

As of 2020, a total of 37.7 million people worldwide was living with HIV, out of which 1.5 million were newly infected[1]. India has the second largest burden of HIV globally with 23.19 lakh People Living with HIV (PLHIV). The national estimate for HIV incidence was 0.04 per 1000 uninfected population in 2020. HIV/AIDS remains a major public health problem that requires comprehensive and tailored policy measures and community participation for its elimination[2].

The State of Karnataka has the third highest estimate of PLHIV of all the Indian states, averaging 2 lakhs. The main factors responsible for such prevalence is due to the extensive labour migration into the large metro cities in search of employment, low literacy rates leading to lack of awareness regarding safe sex, prostitution, and certain cultural practices such as the Devadasi system and intravenous drug abuse.[3,4]

Despite sincere efforts from the government, there is still a gap in awareness regarding the risk factors of acquiring HIV infection. The HIV epidemic is notable for its heterogeneity, especially in a country like India. Hence, qualitative studies are extremely beneficial in assessing multiple factors responsible for HIV infections. This, in turn, can help in tailoring specific interventions against HIV/AIDS.

OBJECTIVE

To assess the factors influencing HIV infection in selected high-priority, moderate-priority, and low-priority districts in Karnataka

METHODS

This is a qualitative study conducted in Karnataka which comprises 31 districts. In this study, three districts were selected: one district from 22 high-priority districts, one district from 8 moderate-priority districts using simple random sampling by lottery method, and Kodagu was selected by default as the only low-priority district5. Bagalkote was the district chosen from high-priority districts and Ramanagara was chosen from the moderate-priority districts.

A total of 30 participants were included in the study, and by using probability proportionate to size based on the incidence of HIV in the selected districts in the past 6 months of the study, the sample distribution was 21 subjects from high-priority districts, 7 from moderate-priority districts and 2 subjects from low-priority districts in the current study.

Permission was obtained from the Karnataka State AIDS Prevention Society (KSAPS) and ethical clearance from the Institutional Ethical Committee was taken. Respective Medical Officers of ART centres were approached. One ART centre attached to the district hospital from each district was included. Investigators were appointed and trained in qualitative data collection. The timing and venue of the interview were informed in advance. In-depth interviews were conducted by trained field staff. After obtaining informed consent and an initial few minutes, rapport was built. Privacy and confidentiality were maintained. Sessions were recorded with permission. Questions on socio-demographic details, details of diagnosis and treatment, knowledge of HIV/AIDS, travel history, drug abuse, sexual practices, contraceptive use, blood transfusion, and various other factors that made individuals vulnerable to HIV infection were discussed. Impacts of the disease on various domains of the individuals were also included in the interview. Transcripts of interviews were made and analysed using Atlas software.

FINDINGS

A total of 30 subjects were included in the study, including 21 subjects from high-priority districts, 7 from moderate-priority districts and 2 subjects from low-priority districts. The average age of the respondents was 38.5 years 14 of them (46.66%) belonged to the age group of 31-40 years. Most of them were either illiterate or had a Primary School Certificate. Seven of the subjects were manual labourers. One of the subjects was a Devadasi and one was a transgender woman.

The majority of subjects i.e., 66.66% (n=20) were married, with 5 of the subjects (16.66%) who were widowed due to HIV. A majority of them owned BPL cards. The study participants had a variety of symptoms at presentation, with some subjects getting diagnosed prior to major surgery or during regular antenatal check-ups. In the majority of cases, the spouse was also found to be positive.

Most of the study participants reported that their sexual orientation was heterosexuality. One of the participants was a homosexual male, one was transgender and one subject identified as bisexual. As seen in Fig.1 Unprotected heterosexual intercourse was the most common mode of transmission of the disease, with 12 participants (40.00%) admitting to unprotected sex as the reason for developing HIV. Most of the female subjects 9 study subjects (30.00%) opined that they contracted the disease from their husbands.

“I got the disease from having sex”

“I got the disease from my husband. he died 10 years ago. I don't know where he got it”

12 of the participants (40.00%) cited that their spouse was also positive

Three subjects (10.00%) cited homosexual contact as the mode of transmission of the disease.

“I had sex with a man”

One (3.33%) of the subjects cited supernatural powers as the cause of his disease.

“My neighbour died recently... he came back as a ghost to curse me.... I got the disease from that curse”

Many important factors influencing the incidence of HIV were identified in each of the districts. The factors were very different in different districts.

In high-priority districts, the conventional risk factors were still the most dominant factors that influenced the incidence of HIV. Unprotected sexual contact with commercial sex workers remained one of the chief factors responsible for the incidence of HIV in high-priority districts and moderate-priority districts.

“I had sex.... yes.... without anything'

Other factors that were associated with this were the presence of other sexually transmitted infections like herpes simplex infection and a vague history of anorectal surgeries.

“I had a surgery... not sure.... for piles. . they said herpes”

Many of the participants also were from broken homes, with no contact with family or siblings due to property or ancestral and related disputes.

“My family don't talk to me... we are fighting over our old land...”

Only 7 of the study subjects (23.33%) admitted to any form of substance abuse. Four individuals acknowledged alcohol abuse and one individual to smoking. Furthermore, two subjects acknowledged alcohol abuse combined with smoking and chewing tobacco.

In low-priority districts, the two participants (6.66%) were in their early twenties, and used online dating apps like Grindr, for casual sexual relationships. One of the subjects identified as homosexual and another identified as bisexual.

“I use apps... one is there called Grindr.. I can meet other people like me”

Figure 1. Distribution of subjects based on the mode of transmission as stated by subject

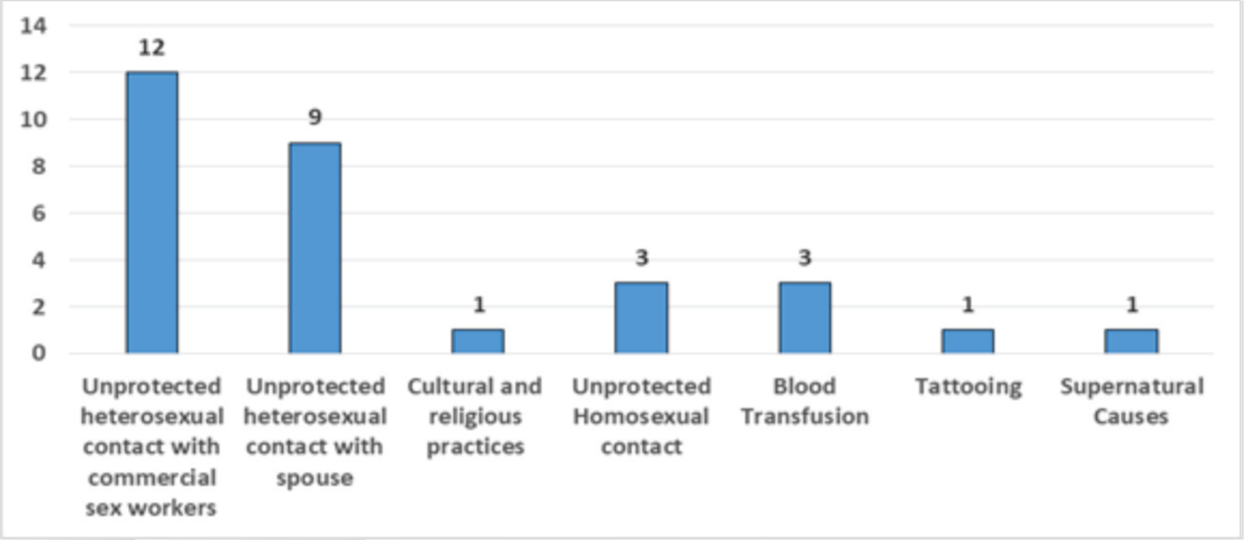
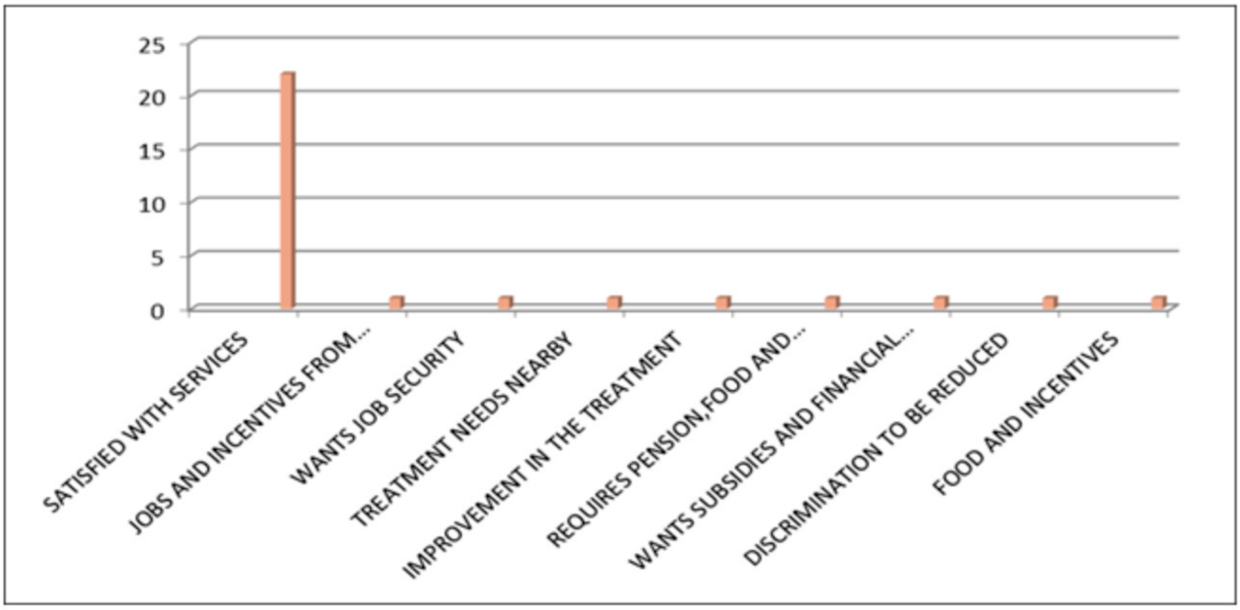


Figure 2. Distribution of study subjects based on satisfaction with government services



As observed in the above diagram, most of the subjects i.e., 73.3% (n=22) were satisfied with the services they were provided uniformly across the three districts, with some suggestions like job security assurance, subsidies, and reduction in discrimination.

CONCLUSIONS

The majority of the study subjects are in their 30s age group and education status was low for most of the people belonging to lower socio-economic groups. A large group of affected individuals belong to unorganized sectors. The mode of disease transmission as said by the patients is through unprotected sexual route. Commonly seen substance abuse was alcohol, and most of the affected individuals came from broken families. In the current study, the two young participants from the low-priority districts admitted to the usage of online dating apps for casual sexual relationships. This data cannot be generalized due to the small sample size, but further research may help to understand emerging risk factors among younger populations.

RECOMMENDATIONS

Health education may be strengthened in the high-priority districts regarding reproductive and sexual health which can lead to better awareness and safe practices.

Strengthening existing healthcare services could help in reducing the prevalence of the infection. In the current study, most of the participants were from low socioeconomic status families with low literacy levels. Further research may be conducted to address these factors which will in turn help in reducing the infection.

Two of the subjects were using online dating apps for casual sexual relationships. This data cannot be generalized due to the small sample size, but further research may help to understand emerging risk factors among young, online populations.

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Identifying At-Risk Population Through Sentinel Surveillance of BMW Handlers and Workers Who Have No Risk Perception of HIV in Gujarat

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INTRODUCTION

The devastating impact of the HIV virus on development has shaken us awake to the need to do more to prevent its spread. While lessons have been learned about effective prevention, many countries are still facing challenges and focusing their efforts on interventions that will have the greatest impact and stem the spread of the virus. The challenges around prevention efforts are especially pronounced in countries where HIV remains largely concentrated in sub-populations that have behaviours associated with a higher risk of contracting and transmitting HIV.NACO has already identified people who inject drugs (PWID) or intravenous drug users (IDUs) and sex workers as high-risk populations. In this study, we want to screen and identify biomedical waste workers (BMW) and handlers who have no risk perception as a possible high-risk population for HIV infection in Gujarat state.

The aim of the study is to identify at-risk populations through sentinel surveillance of biomedical waste handlers and workers who have no risk perception of HIV in Gujarat state.

METHODS

All the consented individuals from the different health facilities, including private, semi-private, and government hospitals from Mehsana district, have undergone HIV screening after pre-test counselling, and a questionnaire has been filled out for all subjects regarding various behavioural characteristics. Post-test counseling has also been conducted for all participants regarding high-risk behaviours. All subjects who tested positive on screening tests have been confirmed by a confirmatory test. All the healthcare workers aged 18-60 years working as employees for healthcare organization/BMW company provided consent and were included in this study.

FINDINGS

A total of 304 healthcare workers participated in this study.

Of the total 304 subjects, no one found sero-reactive. The reason could be due to stigma regarding HIV/AIDS; known positive persons would not have consented to participation in this study.

We can find major misconceptions among participants regarding the route of transmission, clinical presentation and diagnosis, and government policies for prevention (post-exposure prophylaxis) which can amplify their high-risk behaviour.

Regarding awareness about transmission of HIV, 10% did not have knowledge about transmission of such communicable diseases.

13% of BMW workers do not know about needle prick injury being the principal mode of transmission among health care workers, the highest among those who work for 1- 3 years in the profession.

The greatest misconception among BMW workers is that HIV subjects can be identified by physical appearance; 18%, highest among those working since 1- 3 years (47.8%) followed by those working since > 10 years (17%).

12.5% of BMW workers do not know how HIV infection is being diagnosed, highest among those with <1 year.

Approximately half of the staff believes that HIV can be transmitted through physical contact.

Another misconception, prevailing among 18% of BMW workers/handlers is that a person dies immediately after getting infected with HIV, highest among those working since <3 years (26.5%).

Misconception regarding isolating a person with HIV from the public is also high amounting to 20%.

88.5 % of BMW workers/handlers know that HIV/AIDS affects the immune system.

30% of the study population thinks there is no treatment available after getting infected with HIV.

Most of the participants have knowledge about the sexual route of transmission of HIV.

23% of respondents had a misconception about the transmission of HIV via saliva.

98% of participants who work with biomedical waste daily had knowledge about colour-coding of the bags used for biomedical waste.

10% of participants did not use protective measures while working with biomedical waste as reported during the questionnaire.

More than 20% of participants have experienced needle prick injury or exposure to contaminated material during their service, which expectedly increases with continued years of service.

>85% have received training regarding biomedical waste handling and universal precautions, which is highly appreciable.

More than 70% of subjects have answered yes to handling biomedical waste without protective measures which raises alarm for which authority needs to be vigilant for them.

More than 90% of BMW workers and handlers receive protective measures to handle biomedical waste from their respective institutions.

About 20% of respondents are not vaccinated. Hospital administration should implement the vaccine policy in their respective hospitals for all the staff including doctors, nurses and other class 3 and class 4 staff.

More than 50% responded negatively about knowledge about PEP.

Approximately 13-14% have taken PEP during their lifetime for exposure of possible/confirmed HIV-positive blood. This shows the effectiveness and validation of the educational and integrative training workshops and seminars.

CONCLUSIONS

India is committed to ending AIDS as a public health threat by 2030. While the programme has been hugely successful in the past, there is no place for complacency. The current challenges resulting from the diversity of the HIV epidemic with complex and multiple high-risk groups should not be underestimated.

Though we cannot find a higher prevalence of HIV among our study population of biomedical waste handlers and workers, their lack of knowledge and vulnerable work environment makes them prone to high-risk behaviours associated with acquiring HIV/AIDS. We can find major misconceptions among participants regarding the route of transmission, clinical presentation, diagnosis, and government policies for prevention (post-exposure prophylaxis) which can amplify their high-risk behavior

RECOMMENDATIONS

Policies should be made to educate the population in vernacular language to help them better understand the disease/infection and thereby enhance the response to preventive policies by the government. Training or workshops should be attended periodically by such high-risk populations or populations at risk every 2-3 years to reinforce the same knowledge and best practices for prevention.

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