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Training of Program Managers of National AIDS Control Program under GFATM supported Project Sahyog (2021-2024): End line Assessment

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Abstract

Background: A three-year training program was undertaken by the National AIDS Control Organization (NACO) with the goal of enhancing the knowledge and the upskilling of the program managers of the National AIDS & STD Control Program. An initial Training Needs Assessment (TNA) was conducted to identify the gaps where training and upskilling were necessary amongst the program officials working in the program at various levels. This was followed by the training program, under the name 'Sahyog Project', starting from April 2021 onwards, for training of program managers under the National AIDS Control Program (NACP), at all programmatic and operational levels across the country.

Objectives : The objectives of the study were: (i) to assess the level of participation in the training programs; (ii) to assess improvements in knowledge and awareness amongst the training participants and (iii) to evaluate the feedback from the participants of the training program

Methods: Cascade training approach was used since a large number of people within the organization had to be trained within the assigned project period. A pool of Master Trainers at the national level and from each State were trained by instructors from the program at the national level, and they in turn conducted training to the last mile including grassroots level functionaries. The participants of the training sessions were given a 20-question test before and after the trainings to assess the effect of the training on their knowledge levels related to various aspects of the National AIDS Control Program. They were also assigned two open ended questions to provide their feedback on the current program and to obtain suggestions on improving future such programs.

Results: The program was conducted through cascade training model; wherein master trainers were selected predominantly from the NACP workforce. Majority of the trainings took place at the State and District levels thus ensuring that capacitated personnel were available at the state and district level who could further train the cadres working at grassroots level. A target of 1538 participants, pan India across 35 states/union territories was set against which a total of 1428 (93%) were trained. End term assessment showed that more than 90% of the participants attended the training

sessions in over half the states. Pre and post test scores analyzed using statistical tests confirmed improvements in knowledge. Results from the 't 'test showed that the mean score for the pretest was 71.6 and the variance was 131.6. The mean score for the post test was 79.1 and variance was 41.9. The standard deviation was 12.5. It can be inferred that there was a significant improvement in skills of participants post-test with a p <=0.002 with 95% CI.

Conclusions: Based on the findings from the TNA, a comprehensive capacity building program for the NACP workforce covering officials of NACO, State AIDS Control Society (SACS), Technical Support Units (TSU), and District AIDS Prevention and Control Units (DAPCU) was carried out pan India. Most of the trainings took place at the state and district levels, thus ensuring that capacitated personnel were available at the state and district level levels who could further train the cadres working at grassroots level. The high participation rates and the observable improvement in the test scores indicated the effectiveness of the capacity building program in upskilling and reinforcing the knowledge of the participants. The master trainers played a pivotal role as is evident from the feedback from participants appreciating the subject knowledge, helpfulness, knowledge and approachability of the facilitators. It was also evident that there was a need to relook at the duration of the sessions, inclusion of more interactive aspects in the training and logistic arrangements while planning for future trainings.

Key words: National AIDS Control Organization**,** State AIDS Control Units, Technical Support Units, District AIDS Prevention and Control Units, District Integrated Strategy for HIV and AIDS

Background

HIV and AIDS in India has been a major public health problem since the very first identified case in 1986. The number of those infected with HIV rose to the highest peak in the year 2000 reaching an estimated prevalence of 0.55% of the adult population (15-49 years) (NACO & ICMR - NIMS, 2022). The Indian Government has made concerted efforts in combating this epidemic over the past four decades through the National AIDS Control Program (NACP). The NACO has, over the years, implemented four phases of the National AIDS Control Program (NACP) with the fifth phase currently in effect until 2025-26. These efforts have borne fruit in the form of reduction in adult prevalence to as low as 0.21% in 2021. The Annual New Infection (ANI) are estimated at 62.97 thousand in 2021 in India which has shown an estimated 46.3% decline at the national level from 2010-2021. The national level AIDS Related Deaths (ARD) are estimated at 41.97 thousand in 2021 showing a 76.5% decline from 2010-21 (Bhat, Sudhakar, Kurien, & Rao, 2022).

With the United Nations' Sustainable Development Goals 3.3 calling for an end of HIV/AIDS epidemic as a public health threat by 2030 (UN, 2020), the Government of India and NACP has made concerted efforts to achieve the last-mile coverage of the program through a comprehensive package of prevention, detection, and treatment services (Tanwar, Rewari, Rao, & Seguy, 2016). The Phase-V builds upon the initiatives of the HIV/AIDS Prevention and Control Act (2017), Test and Treat Policy, Universal Viral Load Testing Mission Sampark, Community-based Screening, transition to Dolutegravir-based treatment regimen etc., and also introduces newer strategies such as setting-up of Sampoorna Suraksha Kendras (SSK) for providing services through a single window model for high-risk population covering prevention-treat-care continuum with strong linkages and referrals within and outside of health systems (NACO, 2022).

Various global funding agencies have played a significant role in the success of NACO in combating the HIV/AIDS epidemic in the country over the past decades (NACO, 2022). Organisations such as the Joint United Nations Programme on HIV/AIDS (UNAIDS) which brings together ten UN agencies such as United Nations International Children's Emergency Fund (UNICEF), United Nations Development Programme (UNDP), United Nations Population Fund (UNFPA), Word Health

Organisation (WHO), USAID and World Bank to name a few. Global foundations such as the Bill and Melinda Gates Foundation (BMGF) and the Clinton Foundation have also worked closely with the NACO in the scaling up of service delivery and HIV prevention services towards attaining high coverage while also promoting research and training of healthcare workers in the identification and treatment of HIV/AIDS patients. The Global Fund to fight AIDS, TB and Malaria (GFATM), an international health-financing mechanism committed to accelerating the reduction in morbidity and mortality caused by HIV/AIDS, TB and Malaria. They provide an estimated 20 percent of all international funding in support of efforts to combat HIV/AIDS and have contributed over US$ 500 in India since inception to combat these infectious diseases. India has been part of the Global Fund since its inception in 2002 and has been a donor contributor since 2006. In 2022, in the Seventh replenishment cycle, India has pledged US$22 million for three years to help combat infectious diseases around the world. India has been playing a key role in providing quality drugs, tests and diagnostics as part of its efforts to help combat these infectious diseases in other developing countries (The Global Fund, 2023). In recent times the Global Fund has increasingly focused more and more on health system strengthening to combat these 3 diseases more effectively.

The National AIDS Control Program – V (2022 to 2026) has envisioned to break silos in the health system and promote synergies between various vertical healthcare systems, to leverage technology and innovation as critical enablers and to augment strategic information-driven planning, implementation, monitoring, and mid-course corrections. These changes require more holistically trained personnel at various levels to enable inter-silo synergies and to leverage technology as envisioned.

Strengthening human resource capacities is a key strategy for design, delivery, sustainability and scale up of any program. Evidence from a national level training program aimed towards capacity building and creating human resource to tackle the growing burden of Non-communicable Diseases (NCD) in India has resulted in over 5000 individuals including faculty and students from various medical colleges and research institutes across India undergrowing training in prevention and control of NCDs through activities such as seminars, workshops and team-work sessions for the staff, investigators, and students with a focus on both enhancing institution capacity and enhancing skills on clinical research. This also included a one-hour video conference conducted twice a month to facilitate program management and development. The program was shown to evolve over time incorporating the feedback received from the participants as the sessions progressed (Mohan, et al., 2017). An intervention on nurses' knowledge of HIV assessed by train-the-trainer methodology using a quasi-experimental pre-test/post-test design in a tertiary hospital in New Delhi (Nyamathi, et al., 2008) wherein a total of 100 nurses from public hospitals were trained using a ToT model (team of 10 senior nurses trained as master trainers who further trained 10 nurses each). The training strategies included lectures with discussion, role play, and small group sessions. The effect of the two-day intervention was measured using pre- and post-tests administered through a self-taken structured questionnaire which measured HIV-related knowledge in terms of cognitive and transmission knowledge. Significant improvement in the scores were noted using paired t-tests. In another program in Vietnam, over a course of 6 years, a team of 87 nurses received training to become HIV master trainers who then went on to train over 67,000 health care workers on HIV (Williams, et al., 2014). Both the master-trainers and the subsequently trained healthcare workers demonstrated statistically significant improvement in their knowledge, confidence to train others and willingness to provide care for HIV-infected patients. This program demonstrated the sustainability of an educational intervention program through train-the-trainer methodology.

With the objective to train and upskill existing NACO cadre officials, under the **Sahyog project**, a capacity building programme was undertaken between April 2021 to May 2024, supported by the NACO, under the ambit of the Global Fund to Fight AIDS, Tuberculosis and Malaria (GFATM) along with partner organizations namely the Hindustan Latex Family Planning Promotion Trust (HLFPPT), Public Health Foundation of India (PHFI), and Family Health India (FH India).

Training Needs Assessment

A Training Needs Assessment (TNA) was conducted under Project Sahyog in 05 Indian States – Manipur, Maharashtra, Rajasthan, Kerala, and Himanchal Pradesh. The target population for the TNA comprised of NACP Cadres including Project Directors and Additional Project Directors, senior staff of procurement and finance, SACS Officials, TSU officials, DAPCU officials and migrant and truckers TI staff. In all, the sample for the TNA included 137 respondents. The objective was to understand the gaps in the skills and knowledge of the program officials working in the National AIDS Control Program (NACP) at various levels, assess areas for improvement and the components that require greater focus and prioritization within the program. The TNA covered varied topics on the aspect of Capacity Building of NACP Workforce to capture the administrative aspects, technological aspects, training received in last 2 years, program elements covered, enabling pillars, source of training, methodology, quality, challenges. The TNA also captured the training related needs, recommendations, ideal duration, and preferred mode of training. Major findings of the TNA process reflected that a comprehensive capacity building package for the NACP workforce covering officials of SACS, TSU, and DAPCU for effective implementation of the National Aids Control Program (NACP) was required to align with the National Strategic Plan (NSP). A hybrid approach of classroom training and online training was recommended for all the NACP workforce to ensure efficiency and coverage of all the cadres and to maintain the regularity of training for all the cadres of SACS, TSU, DAPCU and DISHA. A pool of master trainers in each State would be instrumental for maximum coverage of the comprehensive training to the last mile and to grassroots level functionaries like health educators, peer leaders, ORWs and counsellors. The pool of master trainers would also ensure sustainability for continuing capacity building activities post-project period. Strengthening multisectoral response through synergies and coordinated efforts for capacity building across different players like health departments, public and private sectors, civil society, institutions and autonomous bodies, health and non-health sectors was recommended to optimize resource utilization and maximize impact. The training curriculum was finalized based on the findings that emerged from the TNA.

Training Methodology

Project Sahyog under the GFATM Grants envisioned to supplement the capacity building of NACP Cadres across 35 Indian States/UT's on a Comprehensive Training Package for Program Managers and Bridge Population TIs. Based on the needs assessed form the TNA conducted for the project and guided by the National Strategic Plan (NSP) for HIV/AIDS and STI (2017-24), the project aimed to provide a comprehensive capacity building package for the NACP workforce including officials of SACS, TSU, and DAPCU/DISHA for the effective implementation of the National AIDS Control Program (NACP). A hybrid approach of classroom training and online training was adopted to ensure efficiency and coverage as well as to maintain the regularity of training for all the cadres of SACS, TSU, DAPCU and DISHA. It should also be noted that though the project also covered the training of the TIs staff serving the Bridge populations, this study is restricted to an assessment of the program managers trainings only.

The training approach was that of 'Train the Trainers' model through a cascade model, wherein a pool of master trainers at the national level and from each State were trained and leveraged for maximum coverage of the comprehensive training to the last mile and to grassroots level functionaries like health educators, peer leaders, ORWs, and counsellors (CDC, 2020). This pool of master trainers was selected predominantly from the NACP workforce to sustain their continued engagement in NACO-hosted training courses beyond the project life. The selected Master Trainers were divided into two categories, i.e., 70 Master Trainers for program managers' module and 30 for bridge population training. The project conducted national level Training of Trainers (ToT) courses for master trainers through a 4-day residential classroom training and an online refresher training subsequently.

The selection of the master trainers was a three-step process mediated through the Capacity Building Hub. The Capacity Building Hub constituted a pool of 4 technical and managerial project officers, who were responsible for planning, coordination, implementation and monitoring of the training activities. The CB Hub initiated the program through preparing a tentative list of master trainer candidates in consultation with different state teams (SACS) following which master trainers were selected from this state nominated list. The final list was then prepared in consultation with NACO. These selected master trainers were trained by the subject matter specialists in NACO including senior managerial and technical staff of the concerned divisions who facilitated the training sessions. External experts with experience of implementing the program, were also incorporated in the training program where needed.

The training modules covered the following aspects of the program:

1. Introduction and NACO structure – which included basics of HIV/AIDS, overview of the public health system structure and the NACO program
2. Key Program Components – with overview of sexually transmitted infection (STI), Targeted Intervention Program, HIV counselling, HIV care and treatment, and laboratory services
3. Supporting Components – which included strategic information and management unit (SIMU), efforts towards mainstreaming and partnerships, The HIV and AIDS (Prevention and Control) Act, 2017 and the community engagement efforts
4. Enabling Pillars – which included HR, administration, procurement and supply chain management, basic financial system under NACP, the role of partners, donors, and civil society organizations, and review and supervisory mechanisms at national, state and district levels.

Findings

A total of 102 training sessions were conducted between June 2022 and May 2024 in 35 states/union territories covering State AIDS Control Societies, (SACS), Technical Support Units (TSUs), District AIDS Prevention and Control Units (DAPCU), District Integrated Strategy for HIV and AIDS (DISHA) and other service delivery centers in the program. In addition, a staff from the technical support units TSU / SETU) providing support to the SACS were also trained. Through these training sessions, a total of 1428 NACP cadre officials were trained during the entire span of the project between June 2022 and May 2024. The details on the number of officials trained and the cumulative numbers trained during the project period is provided in Figures 1 & 2.

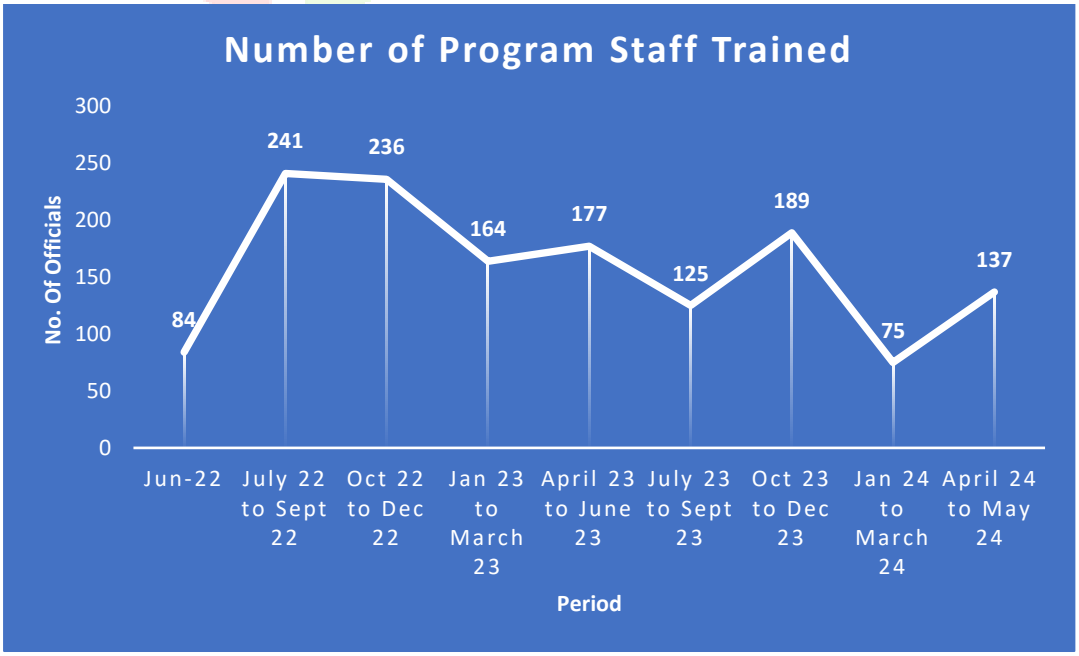

Figure 1 – Number of Officials trained between July 22 to May 2024

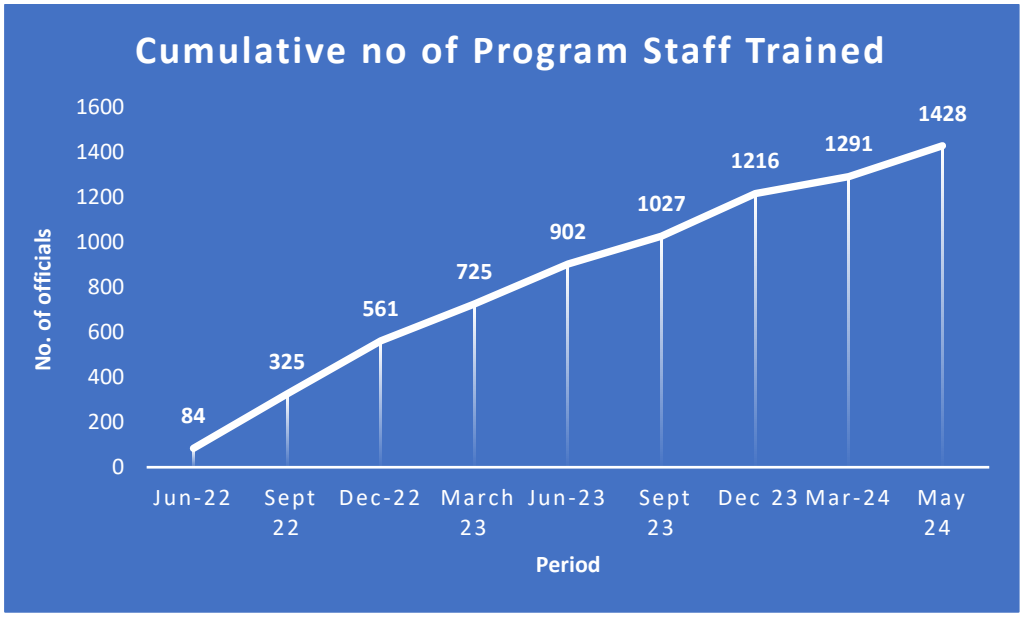

Figure 2 - Cumulative number of officials trained over the course of the training program

The trainings covered a wide range of management and service delivery centers under the NACO program from the state level to the district levels. The share of SACS, TSU and DAPCU, DISHA and SETU covered during the trainings is provided in the figure below.

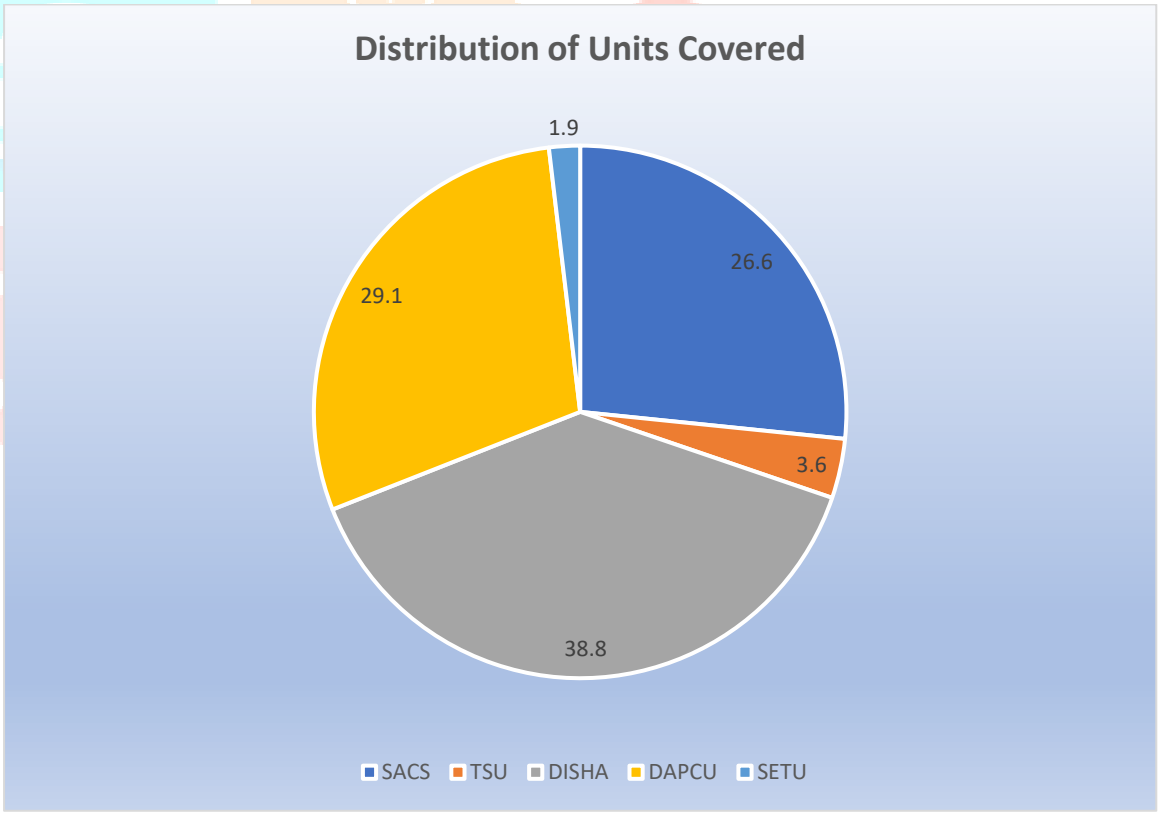

Figure 3 - Distribution of Units Covered by the Training Program

The figure demonstrates that most of the trainings took place for program staff at the state and district levels, thus ensuring that capacitated personnel were available at these levels who could further train the cadres working at grassroots level.

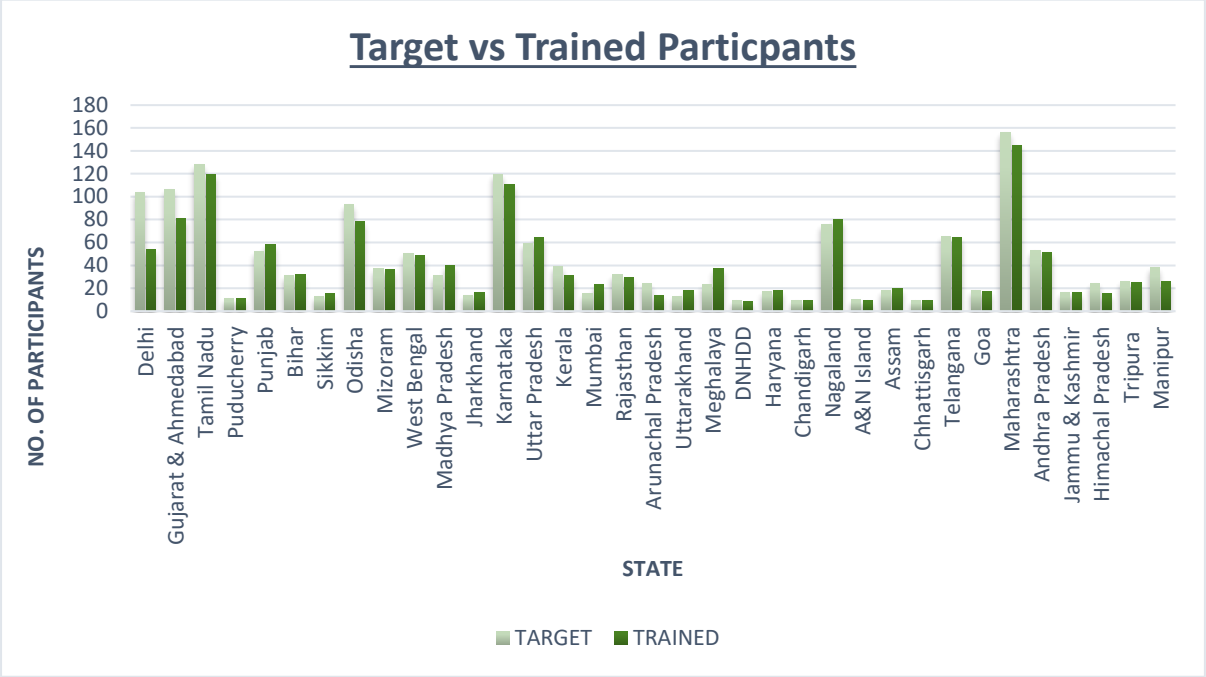

Figure 4 – Targeted vs Trained Participants

The above graph shows the expected participation against the actual participation in the training sessions conducted across the various states. The total target across 35 states was 1538 participants, of which, a total of 1428 (93%) were trained. Over half the states had more the 90% of the expected target participating in the training. States like Madhya Pradesh, Uttar Pradesh, Nagaland, Meghalaya, Punjab, Sikkim etc., showed higher-than-expected participation, while, participation was comparatively poor in states such as Arunachal Pradesh (58%); Himachal Pradesh (62%) and Manipur (68%).

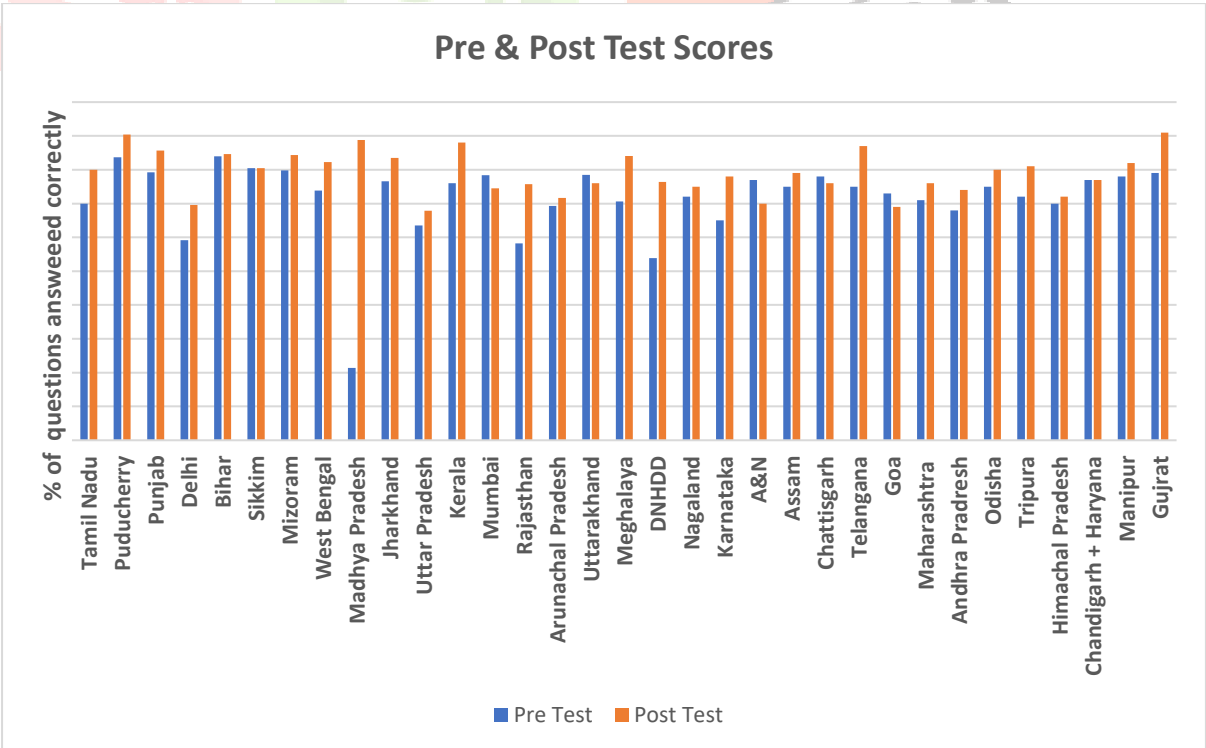

Figure 1 - Pre and Post test scores of participants of training program

The participants of the training sessions were given a 20-question test before and after the training to assess the effect of the training on their awareness and knowledge levels related to the NACP. Five sets of 20-question questionnaires were prepared for the testing process. These questions covered various aspects of the HIV & AIDS detection and control systems that were covered in the training module. One of the five sets of questionnaires was selected for one training session and the participants were asked to answer the questions before and after the training program. There is an observable increase in the scores in most of the states covered in terms of knowledge of the program. There was an average 8% increase in scores between pre and post assessment across the states/union territories, with the participants from Madhya Pradesh showing the highest improvements in their score at 67%; followed by Dadar and Nagar Haveli and Daman and Diu at 23%, followed by those in Rajasthan at 17%. However, there seemed to be no improvement in Andaman and Nicobar, Mumbai, Uttarakhand and Goa.

The pre and post test scores were further analyzed by running statistical tests to confirm improvement in scores after a training session. The test scores were paired at the training session level and the mean pre and post test scores were calculated using 't 'test paired two sample for means. The mean score for the pretest was 71.6 and the variance was 131.6. The mean score for the post test was 79.1 and variance was 41.9. The standard deviation is 12.5. It can be inferred that there is significant improvement in skills of participants post-test with a $p <= 0.002$ with 95% CI).

Participant Feedback

Feedback was also obtained from the training participants to assess their training experience and to receive suggestions on how to improve further training sessions. These responses were anonymous and received using online forms both in the form of scores on various aspects of the training program and also as feedback comments.

The participants were asked a series of questions at the end of the training session to assess their satisfaction with various aspects of the training module. This feedback was received through online Google Forms submission. The responses were in the form of scores between 1 and 4 where 1 was not all effective and 4 excellent. These responses have been summarized in the figure below.

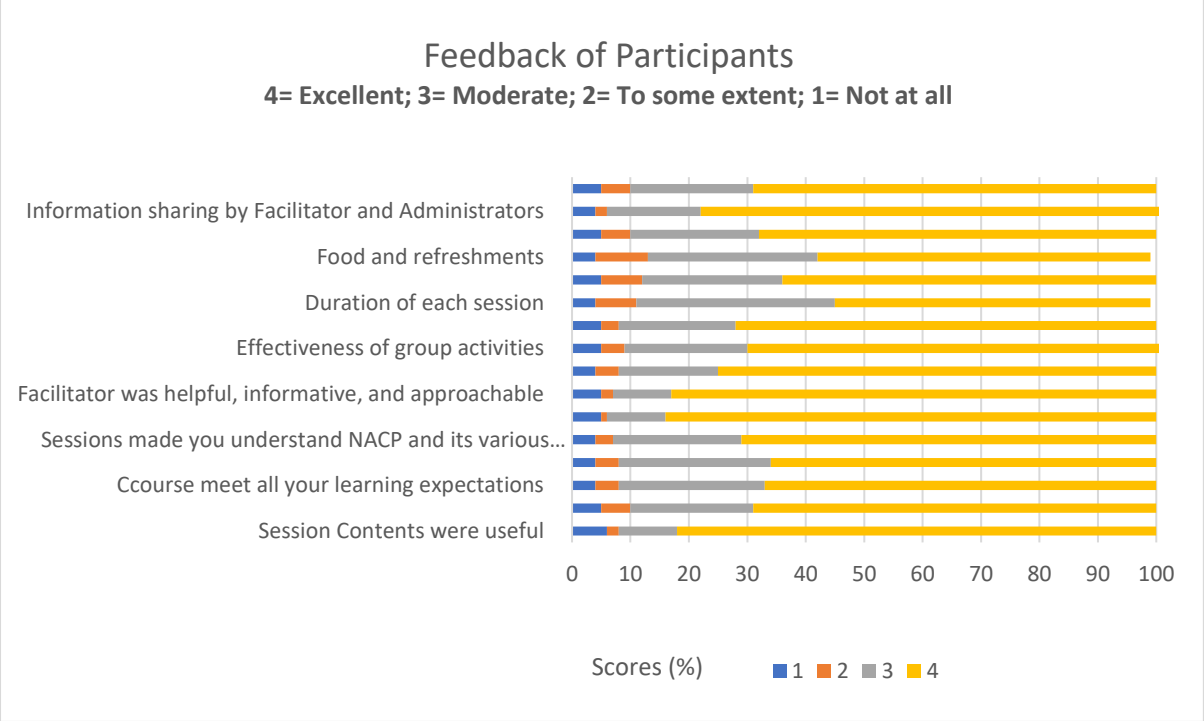

Figure 5 - Summary of feedback scores received from participants after training session

It was observed that majority of the participants were satisfied with the various aspects of the training program. More than 70% of the participants expressed that the trainings were excellent and highly useful, 21% felt the trainings to be moderately useful and a meagre 5% of the participants felt that the trainings were not at all useful. The most satisfactory aspects included subject knowledge of training facilitators, helpfulness, information and approachability of facilitators followed by relevant session content and information shared by facilitators and administrators. This highlights the key role that the master trainers played in the training program implementation. The least satisfactory aspects were the duration of the sessions and the food and refreshments provided during the training.

The participants were further asked open-ended questions regarding their feedback on their training experience and their suggestions for improvement of future such sessions. These responses have been summarized in the form of word clouds below.

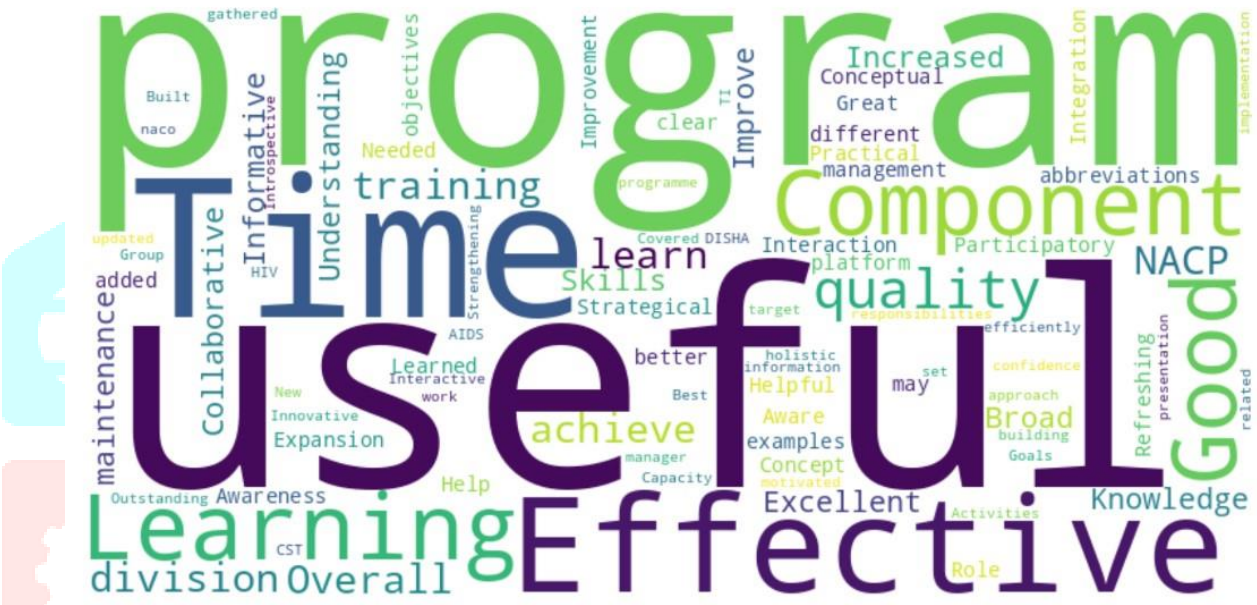

Figure 6 - Word cloud demonstrating the most common words used in response to the question: "Please describe in simple words, the most useful aspect of the training and how it will affect your work?"

In response to the question “Please describe in simple words, the most useful aspect of the training and how it will affect you work?” the participants found the training session both useful and effective and their responses focused on the informative aspects of the training, programmatic understanding, and the knowledge gain through the program. There is an expectation to be more effective in their work after the training received by the participants.

Figure 7 - Word cloud demonstrating the key words used in response to the question: "In what way do you suggest improving the quality of the training in future?"

The participants were also asked to provide their suggestions and comments on the improvement of future training sessions with the question: “In what way do you suggest improving the quality of the training in future?”. The responses showed the need for extended sessions or an increase in the number of days of training. The participants also felt that there should be more participants as well as more interactive group sessions. Information on management and the need for refresher course were also expressed by most participants. These likely stemmed from the perceived usefulness of the topics covered in the training programs and perhaps from covering too many topics over a shorter duration of time. These may be addressed during future training programs by either increasing the number of days of training session or by reducing the number of topics covered in one training session. The request for more interactive sessions showed the level of engagement these interactive training methodologies garner and should encourage more such interactive aspects in training programs in the future.

Conclusions

One of the key issues in the effective implementation of the NACP has been the significant number of vacancies among the officers in the program and the resultant taking up of multiple roles by existing officers covering and managing multiple aspects of the program for which they are poorly prepared. Such training programs that provide the cadre with a broad overview of the program and trains on the key aspects of the program and its implementation will act as both a refresher for those already trained in particular aspects and also provide a holistic working knowledge to all the officers of the overall activities of the program, such that any lacunae in the availability of officers can be easily occupied by the existing officers until the vacancies are filled.

The train-the-trainer approach in upskilling human resources in various aspects of healthcare research and implementation is a well-established method. Project Sahyog training programs covered 35 states/union territories and capacitated 1428 NACP officers on various aspects of the

NACP. The high participation rates and the observable improvement in the test scores indicate the effectiveness of this program in upskilling and reinforcing the knowledge of the participants of NACP efforts in eradicating HIV/AIDS as a public health issue by 2030. The feedback from the participants demonstrates involvement of approachable facilitators and instructors. This ought to be reinforced in future training of master trainers for sustained continuation of the program. The suggestions received from the participants regarding the expectation of longer training sessions in terms of number of days, inclusion of more interactive aspects in the training and increased coverage of management aspects of the program needs to be considered while designing future training programs.

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