

Achievements and Implications of HIV Prevention Programme among Transport Workers: A Systematic Evaluation of HAF II Project in Bayelsa State, Nigeria

Ademola L. Adelekan^{1,7}, Temple R. Iluma², Nwodo P. Onyema³, Prosper Okafor⁴, Kizito Andah⁵, Enuma Charles², Michael Owojuyigbe⁶, Oladipupo S. Olaleye^{1,7}, Adeyimika T. Desmennu⁷, Diepreye Alagoa², Eunice Sammy-Boy², Blessing Emmanuel², Kelly Ighile², Elizabeth Edoni⁸, Olusegun Adeoye⁹, Michael Olugbile⁹

¹Blue Gate Public Health Promotion Initiative, Ibadan, Nigeria

²Bayelsa State Agency for the Control of AIDS, Yenagoa, Nigeria

³Chrismarax Health Care Initiative, Yenagoa, Nigeria

⁴Centre for Development and Empowerment of Commercial Motorcyclist, Yenagoa, Nigeria

⁵Kindling Hope Across Nations Initiative, Yenagoa, Nigeria

⁶Department of Sociology, Faculty of Social Science, University of Ibadan, Ibadan, Nigeria

⁷Department of Health Promotion and Education, Faculty of Public Health, College of Medicine, University of Ibadan, Ibadan, Nigeria

⁸Department of Community Health Nursing, Niger-Delta University, Wilberforce Island, Nigeria

⁹HIV Programme Development Project, World Bank, Abuja, Nigeria

ABSTRACT

Background: HIV prevention programs across the world have considered drivers of articulated vehicles, especially those travelling long distances, as an important bridge population for the transmission of HIV to the general population and are thus a major target for HIV reduction programming. This paper therefore presents achievements of HIV prevention programme among transport workers in Bayelsa State, Nigeria including its implications for future programming.

Methods: A total of three civil society organizations were engaged by Bayelsa State Agency for the Control of AIDS and funded to provide HIV prevention programmes under the HIV/AIDS fund (HAF) II project. A total of 3900 transport workers were the estimated sample size for this intervention and purposive sampling was used in selecting participants. The minimum prevention package intervention (MPPI) was adopted in the implementation of this project and data collected were entered into District Health Information Software (DHIS) 2 before being exported and analyzed using Microsoft Excel.

Results: A total of 35 community dialogues were held and 172 influencers participated within the duration of the intervention. The number of peers registered were 3786 out of which, 462 (12.2%) were registered in the first quarter. The duration of the programme witnessed the distribution of a total number of 39194 condoms which represented 73.5% of the total number of condoms required. A total of 2381 (62.9%) of the registered peers were reached with all the three stages of MPPI and 2878 (76.0%) were reached with only HCT. Among these, 81 (2.8%) were tested positive to HIV.

Conclusion: This study showed that the HIV prevalence was 2.8% among the participants. However, many of the registered peers were missing during HCT. Efforts to develop appropriate IEC materials for drivers and in particular to improve the sustainability of outreach and peer education activities within key communities, should be maintained and reinforced. Also, flexible approaches to condom distribution need to be developed and promoted.

Keywords: HAF II project, Transport workers, HIV/AIDS, Minimum prevention package intervention

I. INTRODUCTION

Nigeria's National HIV and AIDS and Reproductive Health Survey (NARHS Plus II) pointed out that Nigeria was ranked third among countries with the highest burden of HIV infection in the world after India and South Africa, with estimates running up to 3.5 million persons deemed to be living with HIV in the country at the time [1]. The survey also pointed out that out of Nigeria's six geopolitical zones, the South-South zone, to which Bayelsa state belonged had the highest prevalence of 6.3% [1]. Bayelsa state prior to its HIV prevalence of 2.7% according to the 2012 report [1], had previously recorded a prevalence of 9.1% in 2010 which was the third highest in the country as at then [2]. The State was named one of the 12+1 states described as 'hot zones'

contributing the highest HIV prevalence in Nigeria. This made it a priority state for HIV and AIDS prevention and control efforts. Some of the main factors that contributed to the epidemic in the state among others were poverty and low condom use among various vulnerable populations within the state [3]. An important vulnerable population which is most often left out of most HIV programming in the indices of HIV prevalence increase in the State are the mobile workers or as otherwise known transport workers. Although the association between mobility, and infection with HIV has been documented almost since the beginning of the epidemic [4], there has however been little effect, as transport workers often encounter several factors (including; individual and social factors) such as drug and alcohol use, high risk sex and multiple sex partners which increases risks to the sexual network, contacts and families, and facilitates the geographical spread among others. These increase their vulnerability to sexually transmitted infections (STIs), including HIV. Lydie and Robinso [5] reported that in Nigeria, 40 per cent of transport workers reported having been treated for gonorrhoea and syphilis, as were 77 per cent of their sexual partners. Furthermore, they often have inadequate access to health education, thus may lack basic information about HIV and AIDS [6].

Although the prevalence of HIV among transport workers in Nigeria notably dropped from 3.7% [7] to 2.4% [8], transport workers still constitute one of the groups of those most vulnerable to the epidemic [9]. This may be attributed to that fact that long distance drivers are often separated from their regular sexual partners for periods of time and are usually men who are usually sexually active. Also, these men are usually financially empowered and carry significant sums of money to meet their travel needs making them attractive customers to the sex industry [6]. Many transport workers often engage in multiple relationships with women, but not limited to, sex workers who constitute a part of their sexual network, both within and outside their stations. Literature has shown that it is common for transport workers especially drivers to have other partners in the areas through which they drive [5-6,9]. Ekanem et al. [10] reported that even men who are not drivers but who work with them (usually as their managers and conductors) establishes sex networks within their motor-parks with different women particularly sex workers, young female hawkers, schoolgirls, and market women within and outside the motor parks. According to this study, only 11.6% of these women reported consistent and regular condom use with casual partners. Ekanem et al. [10] also noted that transport workers could play a major role in transmitting HIV infection in Nigeria and that there was a need for intervention programmes targeting this group. This paper therefore presents achievements of HIV prevention programme among transport workers in Bayelsa State, Nigeria including its implications for future programming.

II. METHODOLOGY

Study Design

This intervention project was carried out among transport workers in Bayelsa State, Nigeria between April, 2016 and January, 2017. A total of three civil society organizations (CSOs) namely Centre for Development & Empowerment of Commercial Motorcyclists (CEDECOM), Chrismarax Health Care Initiative (CHCI) and Kindling Hope Across Nations Initiatives (KHAN) were engaged by Bayelsa State Agency for the Control of AIDS and funded to provide HIV prevention programmes under the HIV/AIDS fund (HAF) II project.

Study Area

The study area was Bayelsa State; one of the six states in Nigeria's South-south geopolitical region. It was carved out of Rivers State in 1996 and is bordered by Rivers State to the west and northwest, Delta State to the east and southeast, and to the south by the Gulf of Guinea. Bayelsa state covers an area of 9,415.8 km², and a total population from the 2006 census of 1,704,515 (874,083 males and 830,432 females). The state is divided into 8 local government areas (LGAs), with the capital located in Yenagoa [3].

Study Population

The intervention was carried out among transport workers in all the eight LGAs across the State who are members of the National Union of Road Transport Workers (NURTW).

Sample size

A total of 3900 transport workers were the estimated sample size for this intervention

Sampling

Purposive sampling was used in selecting participants from all eight (8) LGAs in the State, which are: Yenagoa, Brass, Nembe, Ogbia, Sagbama, Kolokuma/Opokuma, Ekeremor, and Southern-Ijaw.

Description of Intervention

The minimum prevention package intervention (MPPI) was adopted in the implementation of this project. Project interventions were categorized under the three components of MPPI which are structural, behavioural and biomedical interventions. Activities carried out under each of the component are summarized below;

Structural Intervention

The structural intervention included promotion of community-based interventions with the purpose of creating adequate access to information and services among transport workers. This level of interventions focused mainly on advocacy visits to stakeholders including the NURTW state chairman to seek support towards the intervention; and community dialogues efforts targeted at addressing structural barriers hindering transport workers from accessing and utilizing appropriate HIV prevention, treatment and care services.

Behavioural Intervention

Behavioural intervention which included the use of Priority for Local AIDS Control Efforts (PLACE) approach was used to influence transport workers towards adopting healthy behaviours, whilst reducing their risk for HIV infection. The behavioural intervention was carried out by Peer Educators (PEs) selected among the NURTW community in the state, trained on HIV prevention and related issues particularly the consistent and correct use of condoms. The PLACE sessions were held by the PEs within an interval of 10 to 15 days with a maximum of 3 sessions and minimum of 2 sessions held in a month. The cohort of peers was graduated by the PEs after a minimum contact of 6 and maximum contact 9 sessions. PEs discussed with peers issues concerning partner reduction, condom use, good health seeking behaviour for prompt treatment of STIs, and HIV Counselling and Testing (HCT). Condom distribution was also carried out.

Biomedical Intervention

The biomedical level of intervention targeted increasing access to HIV services among transport workers. HIV counseling and testing (HCT) services as well as referral for antiretroviral therapy (ART) and sexually transmitted infections (STIs) were carried out at this level. The HCT was conducted by the Counselor Testers while data was documented using Client Intake Forms.

Data Collection

Data collection was done using various data collection and reporting tools supplied by the National Agency for the control of AIDS (NACA). Data on behavioural intervention were collected during PLACE sessions by the peer educators using Peer Education Attendance Register, Monthly Tracking Form and Monthly Summary Form and while HCT and referral activities were documented using Client Intake Form, Referral Register and Referral Form. All the data were later summarized into National Prevention Monthly Summary Form.

Data Analyses

Data collected were entered into District Health Information Software (DHIS) 2 and checked for errors and other inconsistencies before being exported and analyzed using Microsoft Excel.

Ethical Issues

Prior to the commencement of the intervention, the proposal was subjected to a two-stage review and ethical approval to conduct the research was obtained from the National and the State Ethical Review Committee, and Federal Ministry of Health, Nigeria. Also, permission was obtained from the State NURTW chairman and all the LGAs chairmen. The criteria for selection of samples included voluntary declaration of participation in the project and the ability for transmission of information. The HIV tests were done under HCT tents within the community, with only one client being attended to at a time to ensure privacy of the client. The HIV Client Intake Forms were kept in a safe place to ensure confidentiality. Those that tested positive were referred for appropriate treatment without the breach of confidentiality.

III. RESULTS

The findings are presented based on the levels of intervention: structural, behavioural and biomedical interventions. The overall target population reached during this intervention was 3786 transport workers given a target reached of 97.1%.

Structural Intervention

A total of 35 community dialogues were held within the duration of the intervention. Out of this, 29 (82.9%) were held in the first quarter of the intervention while the remaining 6 (17.1%) were held in the second quarter. The influencers who took part in the community dialogues in the first quarter were 156 representing 90.7% of the total number of influencers who partook throughout the duration of the intervention (Table 1).

Table 1: Structural Intervention

Period	Number of community dialogues held	Influencers participating in community dialogue
1 st Quarter	29 (82.9%)	156 (90.7%)
2 nd Quarter	6 (17.1%)	16 (9.3%)
Total	35	172

Behavioural Intervention

The number of peers registered during the intervention were 3,786 out of which 462 (12.2%) were registered in the first quarter. The duration of the intervention witnessed the distribution of a total number of 1,482 female condoms; out of which only 0.7% were distributed in the first quarter also 37,712 male condoms were distributed with only 9.5% distributed in the first quarter. The total number of condoms distributed represented 73.5% of the total number of condoms required. The number of lubricants distributed was 908 which also represent only 19.3% of the total number of lubricants required (Table 2)

Table 2: Behavioural Intervention

Period	No of Peers registered	No of condoms required	No of condoms distributed	No of lubricants required	No of lubricants distributed
1 st Quarter	462 (12.2%)	7600 (14.3%)	3576 (9.1%)	350 (7.5%)	70 (7.7%)
2 nd Quarter	3324 (87.8%)	45702 (85.7%)	35618 (90.9%)	4345 (92.5%)	838 (92.3%)
Total	3786	53302	39194	4695	908

Biomedical Intervention

A total of 2878 transport workers were counseled, tested, and received results; this included 74 (6.3%) persons in the first quarter. Among these, 81 persons tested positive and were referred for further services. A total of 63 persons were referred for STI services and among these, majority 92.1% were referred in the second quarter (Table 3).

Table 3: Biomedical Intervention

Period	No counselled tested and received result	No of persons who tested positive	No of persons referred for STI service	No of persons currently receiving STI services
1 st Quarter	674 (23.4%)	25 (0.0%)	5 (7.9%)	24 (32.4%)
2 nd Quarter	2204 (76.6%)	56 (100.0%)	58 (92.1%)	50 (67.6%)
Total	2878	81	63	74

Coverage of MPPI, HCT and Prevalence of HIV

A total of 2381 (62.9%) of the registered peers were reached with all the three stages of MPPI and 2878 (76.0%) were reached with only HCT. Among these, 81 (2.8%) were tested positive to HIV (Fig. 1).

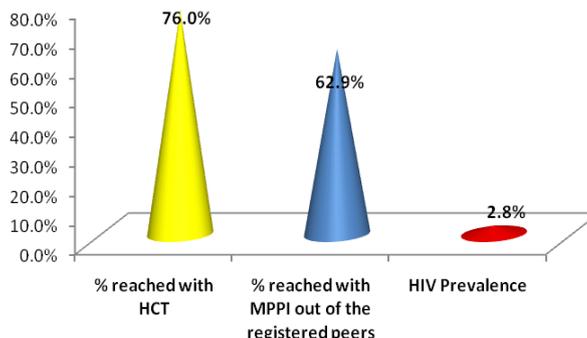


Figure 1: Coverage of MPPI, HCT and prevalence of HIV

IV. DISCUSSION

The association between mobility, mobile workers and infection with HIV cannot be written off because individuals who work within the transportation sector in which mobility is at its peak are perhaps the greatest conduits of the epidemic across geographic zones [4]. This is because of many indices that put them at risk perhaps more than any other sub-population. These indices include the tendency to establish a multiplicity of sexual networks wherever they find themselves, alcohol consumption, inconsistent condom use among others [6]. While transport workers may not need income generation activities, as indicated in this intervention since they often have access to enough money from their work which make them attractive prospects to all sorts of sexual partners and networks, this group are however most in need of health education on issues regarding sexual negotiation, condom programming, HCT among many other reproductive health topics. As observed in this study, less than the estimated sample size were able to be registered as peers. This can of course be attributed to their unstable schedules and constant mobility inherent in their line of work. Thus, reaching transport workers with health education activities at every available opportunity such as at the motor parks and temporary stations would be a winning approach especially regarding correcting myths and misinformation which may further directly or indirectly contribute to their exposure to contacting or spreading the infection. Findings of the current study conforms with findings from a World Bank study which pointed out that although about 70% of transport workers knew of the existence of counseling centers within their communities, only about 25% had ever had an HIV test. The trend unfortunately continued in this intervention with only less than a quarter of the estimated sample size voluntarily turning up for HCT. This might of course be because many of them could wrongly believe that their chances for contracting HIV were slim or entirely non-existent [11].

Condom distribution, an important and integral part of condom programming and negotiation was used to encourage safer sex and to bring about a change in sexual behaviour among both the transport workers and their sexual partners. Although, the total number of condoms distributed in this intervention represented 73.5% of the total number of condoms required. Studies done on condom usage among transport workers in Nigeria point to the fact that majority of them rarely make use of condoms. A study found that 70.0% of the respondents knew about condoms with regards to HIV prevention, with only 9.0% consistently making use of it [12]. Likewise, another researcher found out that over two-thirds of drivers never or rarely used condoms [13]. Condoms are noted to be used more regularly with casual or sex workers as found in the behavioral study on transport workers, where on the average, 6.0% of the respondents made use of them with their regular partners and above 80.0% used them with casual or sex workers [14]. Studies have also found that the usage of condoms among the drivers was tied to their level of education. Condom usage was higher among respondents with at least secondary education [12;15]. This intervention recorded an HIV prevalence of 2.8% among participants. This is similar to what was reported by Atilola et al., [16] among long-distance truck drivers in south-west Nigeria where a prevalence of 2.4% was recorded. This is also conforms to the national HIV prevalence of 2.4% among transport workers [8]. Several studies undertaken have confirmed high prevalence of STIs (2% - 14%) [17-19] and HIV (2% - 16%) among truckers in India [17-20]. Only few of the participants were referred for STI services. Recent studies conducted also found relatively lower prevalence of syphilis ranging from 1.7% - 2.7% [17-18]. The prevalence of *Neisseria gonorrhoea* and genital chlamydial infections has been found low ranging from 1%-2% [21] or even lesser among truckers in India [17-18]. These findings are however open to further research as there are quite a number of factors that could contribute to these reportedly low rates.

Implications for Programming

In any future HIV programmes among transport workers, efforts should be made to understand their sexual networks, marital statuses, pattern of alcohol consumption as these often greatly impact their sexuality and subsequently, their condom negotiation and programming behaviours. Furthermore, transport workers as pointed out often do not have adequate access to health education, thus may lack basic information about HIV and AIDS. Programming efforts in the future should therefore go beyond peer sessions and look into providing information through their associations, as well as integrating HIV prevention programmes into their association meetings and events to foster community involvement and participation for sustainability and continuity of such programmes. It is also crucial to provide more condoms and lubricants for transport workers in future interventions to aid proper condom programming adherence even after the end of the intervention. Also, support services wherein the HIV positive transport-worker clients can get easy access to services such as setting up appointments, as well as financial support or means of income provision, should be provided. Other initiatives could also include providing life-long antiretroviral therapy for all infected transport workers and pre-exposure prophylactic drugs for the uninfected. Interventions that target drivers alone, without addressing the surrounding communities and the partners at home, and without seeking to reduce the structural factors that increase vulnerability to HIV are synonymous to planning to fail. Therefore, HIV prevention and care activities for drivers must address the particular environments, and conditions in the "risk zones" that grow up around transport nodes, and also the families and other partners of the drivers, who may live far away. Efforts to

reinforce communication and negotiation skills between drivers and their sexual partners through proper contact tracing are especially promising, and very uncommon, with the exception of programmes in South Africa, Thailand, and India, where transport companies and implementers have taken innovative measures to encourage drivers' wives and sex workers to talk with drivers about sexuality. Such efforts should also include the young girls from surrounding communities and female itinerant traders, who are often especially at risk in their interactions with drivers. Such women should be systematically included in the design and development of projects targeting transport workers. More broadly, STI/HIV prevention efforts concerning the transport sector should be expanded to include the communities affected by the movement of goods along highways. They must be supported by community mobilization, thus ensuring that they involve all of those who may thus become vulnerable to STIs and HIV. Interventions with women community leaders around HIV prevention, education and services are immediately and urgently needed. In sum, programme interventions in the land transport sector should target not only drivers, but their sex partners, risk zone "hot spots", people working with them and surrounding communities.

V. CONCLUSION

This study showed HIV prevalence of 2.8% among long distance drivers and transport workers in Bayelsa State at the time of the intervention. However, many of the registered peers were missing during HCT. Continued high risk sexual behaviours of transport workers which increases the risk to the sexual network, and immediate families, as well as facilitates the geographical spread are likely results of this failing to reach the target population. The paper thus concludes that transport workers could play a pivotal role in the transmission of the HIV virus in Nigeria, and at the same time, serve as key in reducing its spread. Efforts to develop appropriate IEC materials for drivers, and in particular to improve the sustainability of outreach and peer education activities within key communities, must be maintained and reinforced. Representatives of transport workers should participate in the design of material, and also be included in implementation teams. In addition, flexible approaches to condom distribution need to be developed and promoted, such as the Condom Bank located in major filling stations, which makes condoms available at any hour of the day or night. Partly because of their mobility, and also because of their working schedules, drivers face many obstacles in gaining access to medical care. Thus, health centres stationed at transit points along highways are an efficient means of encouraging drivers to seek out STI treatment. In sum, STI/HIV prevention efforts to be specifically targeted towards truckers must find creative means of outreach.

ACKNOWLEDGEMENT

The evaluation team wishes to acknowledge the World Bank and the National Agency for the Control of AIDS (NACA) for making available the funding for the evaluation and dissemination of this project intervention. Special appreciation goes Alex Ogreagade, Claude Ujile and Weniabi Zibiya for their support during this project implementation.

REFERENCES

- [1]. Federal Ministry of Health (FMOH). 2012. National HIV/AIDS and Reproductive Health Survey (NARHS Plus II). Federal Ministry of Health, Abuja, Nigeria. Available at: <http://nascp.gov.ng/demo/wpcontent/uploads/2014/02/NARHS-Plus-2012-Final-18112013.pdf>.
- [2]. Federal Ministry of Health (FMOH). National HIV Sero-Prevalence Sentinel Survey 2008. Federal Government of Nigeria
- [3]. Bayelsa State Ministry of Health and FHI 360. 2013. Bayelsa State-wide Rapid Health Facility Assessment, Nigeria: Bayelsa State Ministry of Health and FHI 360.
- [4]. UNAIDS and the International Organization for Migration (IOM). Special Issue: Migration and HIV/AIDS, International Migration Quarterly Review, 36(4), 1998
- [5]. Lydie, N., and N. Robinso, "West and Central Africa", in Special Issue: Migration and HIV/AIDS, International Migration Quarterly Review, 36(4), 1998,
- [6]. The International Organization for Migration (IOM) and UNAIDS. 2005. HIV and Mobile Workers: A Review of Risks and Programmes among Truckers in West Africa
- [7]. Federal Ministry of Health (2007) Integrated Bio-behavioural Surveillance Survey among Most-at-risk Populations in Nigeria. Abuja: NASCP.
- [8]. National Agency for the Control of AIDS (NACA). 2014. Federal Republic of Nigeria, Global AIDS Response – Country Progress Report
- [9]. Sibiri E. and Ayinmoro A. 2015. The Psychosocial Effects of People Living with HIV/AIDS at the Niger Delta University Teaching Hospital Okolobiri, Bayela State Nigeria. Global Journal of Arts, Humanities and Social Sciences Vol.3, No.7, pp.22-34, July 2015
- [10]. Ekanem EE, Afolabi BM, Nuga AO, Adebajo SB. Sexual behaviour, HIV-related knowledge and condom use by intra-city commercial bus drivers and motor park attendants in Lagos, Nigeria. Afr J Reprod Health. 2005;9(1):78-87.
- [11]. World Bank. 2014. Nigeria Epidemiology and Response Synthesis Report. July, 2014.
- [12]. Sunmola AM. Sexual practices, barriers to condom use and its consistent use among long distance truck drivers in Nigeria. AIDS Care Feb 2005
- [13]. Oduwole M, Jeminusi OA, Aderogba OI, Okuboyejo OB. Infl uence of long distance truck drivers (LDTDs) HIV/AIDS Knowledge and Attitude on the use of condoms. International conference on AIDS, 2002 Jul 7-12

- [14]. Federal Ministry of Health Abuja Nigeria. Technical Report, 2007 HIV/ STI- Integrated Biological and Behavioural Surveillance Survey (IBBSS).
- [15]. Idris SH, Sambo MN, Obi P. 2013. Comportment of heavy goods vehicle drivers in HIV spread along settlements around Kaduna: Kano road transport corridor in Nigeria. *International Journal of Medicine and Public Health*. Jan-Mar 2013. Vol 3. Issue 1
- [16]. Atilola Glory, Onoja Matthew Akpa , I.O.O. Komolafe. HIV/AIDS and the long-distance truck drivers in south-west Nigeria: A cross-sectional survey on the knowledge, attitude, risk behaviour and beliefs of truckers. *Journal of Infection and Public Health* (2010) 3, 166—178
- [17]. Pandey, A., Benara, S.K., Roy, N., Sahu, D., Thomas, M., Joshi, D.K., et al. (2008) Risk Behaviour, Sexually Transmitted Infections and HIV among Long-Distance Truck Drivers: A Cross-Sectional Survey along National Highways in India. *AIDS*, 22, S81-S90. <http://dx.doi.org/10.1097/01.aids.0000343766.00573.15>
- [18]. Pandey, A., Mishra, R.M., Sahu, D., Benara, S.K., Sengupta, U., Paranjape, R.S., et al. (2011) Heading towards the Safer Highways: An Assessment of the Avahan Prevention Programme among Long Distance Truck Drivers in India. *BMC Public Health*, 11, S15.
- [19]. Manjunath, J.V., Thappa, D.M. and Jaisankar, T.J. (2002) Sexually Transmitted Diseases and Sexual Lifestyles of Long-Distance Truck Drivers: A Clinico-Epidemiologic Study in South India. *International Journal of STD & AIDS*, 13, 612-617. <http://dx.doi.org/10.1258/09564620260216317>
- [20]. Dude, A., Oruganti, G., Kumar, V., Mayer, K.H., Yeldandi, V. and Schneide, J.A. (2009) HIV Infection, Genital Symptoms and Sexual Risk Behavior among Indian Truck Drivers from a Large Transportation Company in South India. *Journal of Global Infectious Diseases*, 1, 21-28. <http://dx.doi.org/10.4103/0974-777X.52977>
- [21]. Bhoruka Public Welfare Trust (BPWT) (2001) Prevalence of Sexually Transmitted Infections and HIV among Long Distance Intercity Truck Drivers and Helpers of Eastern India. Department for International Development (DFID) and Family Health International (FHI), New Delhi