Research Article

A STUDY TO ASSESS THE ROLE OF COMMUNITY BASED ORG--NISATIONS IN SUPPORTING ARV AND PREP BEFORE AND DURING COVID-19 IN HO CHI MINH CITY AND DONG NAI PROVINCES IN VIETNAM

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Abstract

In Vietnam, the HIV incidence has been on a downward trend in the past couple of years. However, the infection rate is still high, and cases and deaths are still increasing. In 2020, the prevalence of HIV was about 213,724 with 109,446 Mortalities Ho Chi Minh City (HCMC) represents the highest incidence rate in the country with 2,970 new cases. There are a total of 48,896 people living with Human Immunodeficiency Virus (HIV) in HCMC and of these 42,363 are currently on Anti-Retroviral treatment (ARV). Dong Nai recorded a high rate with 443 new cases. By the end 2020, 5,450 people living with HIV in Dong Nai and 3,055 who are currently on ARV were reported by the Vietnam administration of HIV/AIDS control. *ASEAN Journal of Psychiatry, Vol. 24 (3) March, 2023; 1-11.*

Keywords: Human Immunodeficiency Virus (HIV), Anti-Retroviral treatment (ARV), Vietnam administration, Infection rate, Prevalence

Introduction

The Pre Exposure Prevention (PrEP) program had been launched in Vietnam with a goal to fast track targets of 90-90-90 by 2023. PrEP has been proven to be effective and is recommended to reduce the rate of HIV infection [1,2]. The PrEP program was first implemented in March 2017 in Ho Chi Minh City. By 2022, there were nearly 11,686 Men having Sex with Men (MSM) who was receiving PrEP counselling and treatment [3].

In Vietnam, a Community Based Organization (CBO) includes a variety of local organizations with staff that are familiar with the needs of a particular high risk population or community (e.g. transgender/people living with HIV, etc.). In HIV/AIDS prevention, the interventions offered by the CBO are most relevant with a frontline role and have been found to be of proven effective in HIV/AIDS prevention, early detection and complete support for HIV patients [4-7].

In Vietnam, since 2011, HIV/AIDS prevention and control activities have had strong participation from CBOs, focusing mainly on high risk groups including: MSM, transgender women, Injecting Drug Users (IDUs), and female sex workers. The application of a CBO model in HIV infection prevention has been quite effective with detection rates of new positive cases up to 6%-7% of the total number of tested persons.

The COVID-19 pandemic had disrupted the care continuum services in various settings. The restrictions in response to the pandemic made the functioning of the CBOs challenging. Resource shortages, low staff morale, and disruption to patient cantered service provision were listed as the key challenges for the CBOs. It was extremely important to adjust the delivery and approach strategies, coordinate with stakeholders to support patients on time and in a comprehensive manner. This was especially relevant in context of the PrEP and ARV clients

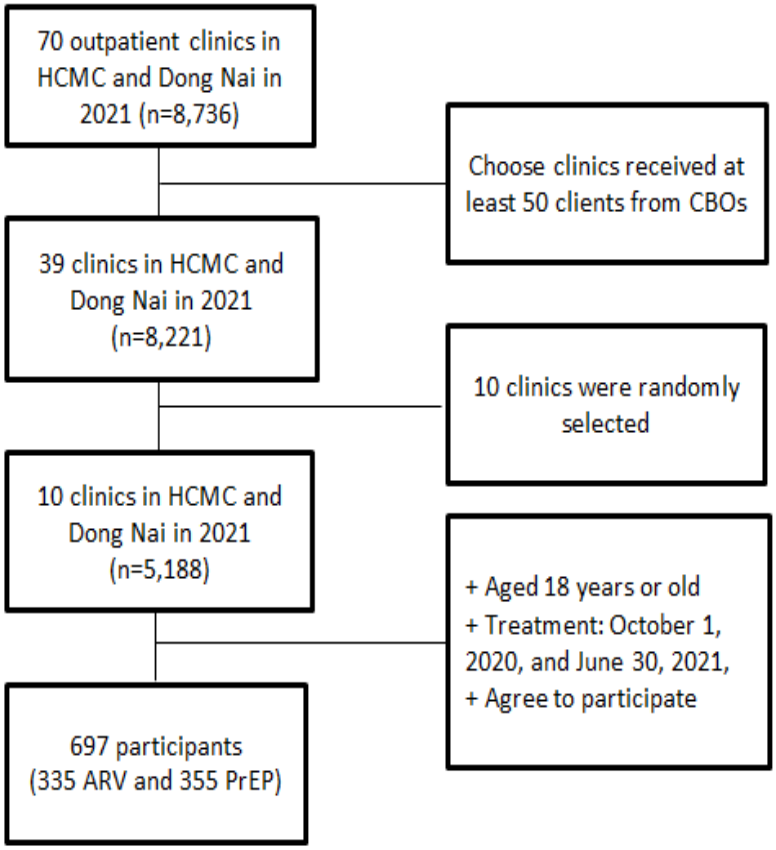

Figure 1. The recruitment process of study participants.

Assessment tools

The information was gathered using the existing medical records of the clients as well as face to face interviews. A predesigned semi structured questionnaire that was prepared and approved by a multidisciplinary team of researchers was used for this purpose. The questionnaire included questions on general socio demographic and clinical profile (14 questions), characteristics of PrEP/ARV treatment (9 questions), Morisky Medication Adherence Scale (MMAS-8 Scale) (8 questions), understanding of CBO (11 questions), Client Satisfaction Questionnaire (CSQ-8) (8 questions), PrEP/ARV treatment during COVID-19 (4 questions).

Therapeutic adherence was calculated based on the Morisky medication adherence scale. This eight item tool is a structured self-report measure of medication taking behaviour that has been widely used in various cultures. The overall MMAS-8 scale ranges from 0 to 8. The adherence was classified into 2 levels: High adherence (6-8 points) and low adherence (<6 points) [11].

The Client Satisfaction Questionnaire (CSQ-8), which has 8 items measures client satisfaction with services. The CSQ-8 items were chosen based on factor analysis after mental health professionals rated a number of items that might be connected to client satisfaction. The CSQ-8 measures general satisfaction with services in a uniform manner because it is unidimensional [12].

Statistical analysis

The data were analyzed using the STATA software, version 10.0. Description of frequencies and percentages for socio demographic characteristic variables and treatment was done.

Logistic regression was used with estimated Odds Ratio (OR) with corresponding 95%

Confidence Intervals (95% CI) to test the association between socio demographic characteristics, treatment characteristics, and treatment adherence. The $p<0.05$ value was considered as the threshold of statistical significance.

Results

A total of 697 clients were recruited, 7 clients (1%) were rejected due to not meeting the criteria for selection. The final analysis sample had 690 clients, including 335 ARV clients and 355 PrEP clients.

The socio demographic characteristics of ARV and PrEP clients according to clients transferred by the CBO and walk in clients are given in Table 1. The majority of ARV and PrEP clients were young men between the ages of 20-29, accounting for more than 50%. Clients transferred by a CBO tended to be younger than walk in clients. The education level of PrEP clients was higher than that of ARV clients. Also, PrEP clients transferred by a CBO were more educated than the group of walk in clients. ARV clients transferred by the CBO had a lower rate of financial autonomy than the group of walk in clients (76.2% versus 85.0%).

Table 1. Socio-demographic characteristics of ARV and PrEP clients according to clients transferred by the CBO and walk in clients in Ho Chi Minh City and Dong Nai Province in 2021 (n=690)

Socio-demographic characteristics[**]	**ARV**[1] **(n=335) (n, %)**		**PrEP**[1] **(n=355) (n, %)**	
	CBO (n=168)	**Walk in (n=167)**	**CBO (n=185)**	**Walk in (n=170)**
Age[*]	26 (22-30)	29 (24-35)	26 (22-31)	26 (22-31)
Age group				
15-19	13 (7.7)	6 (3.6)	12 (6.5)	10 (5.9)
20-24	63 (37.5)	36 (21.6)	67 (36.2)	55 (32.3)
25-29	47 (28.0)	52 (31.1)	51 (27.6)	57 (33.5)
30-34	21 (12.5)	21 (12.6)	31 (16.7)	27 (15.9)
≥ 35	24 (14.3)	52 (31.1)	24 (13.0)	21 (12.4)
Gender				
Male	161 (95.8)	154 (92.2)	180 (97.3)	163 (95.9)
Female	5 (3.0)	12 (7.2)	3 (1.6)	6 (3.5)
Transgender women	2 (1.2)	1 (0.6)	2 (1.1)	1 (0.6)
Education level				
Primary school	9 (5.4)	12 (7.2)	3 (1.6)	2 (1.2)
Junior high school	30 (17.8)	23 (13.8)	19 (10.3)	9 (5.3)
High school	51 (30.4)	61 (36.5)	30 (16.2)	28 (16.5)
Above high school	78 (46.4)	71 (42.5)	133 (71.9)	131 (77.1)
Marital status				
Single	150 (89.3)	123 (73.6)	163 (88.1)	159 (93.4)
Married	12 (7.1)	31 (18.6)	11 (5.9)	7 (4.2)
Living with a partner/lover	3 (1.8)	5 (3.0)	9 (4.9)	4 (2.4)
Separated/divorced/widowed	3 (1.8)	8 (4.8)	2 (1.1)	0 (0.0)
Financial status				
Full autonomy	128 (76.2)	142 (85.0)	148 (80.0)	145 (85.3)
Partial autonomy	26 (15.5)	15 (9.0)	32 (17.3)	19 (11.2)
Indigent	14 (8.3)	10 (6.0)	5 (2.7)	6 (3.5)

Occupation				
Office workers	44 (26.2)	48 (28.6)	71 (38.4)	75 (44.1)
Worker/laborer	36 (21.4)	38 (22.8)	25 (13.5)	14 (8.2)
Freelancer	41 (24.4)	26 (15.6)	36 (19.5)	31 (18.2)
Sales/business	16 (9.5)	31 (18.6)	15 (8.1)	8 (4.7)
Student	16 (9.5)	8 (4.8)	30 (16.2)	30 (17.7)
Unemployed	6 (3.6)	10 (6.0)	0 (0.0)	0 (0.0)
Service staff	9 (5.4)	6 (3.6)	8 (4.3)	12 (7.1)

Note: [*]Median (interquartile range); [**]Collected *via* client response; [1]Notes: ARV: Antiretroviral; PrEP: Pre-exposure Prophylaxis.

Table 2 presents the findings on the understanding of ARV and PrEP clients about services of Community Based Organizations (CBOs). Both ARV and PrEP client groups reported that the service clients received was primarily support for transfer to treatment (100%). For ARV treatment, the majority of clients who believed that CBOs supported transfers to confirmed testing facility (84.6%) and psychological counselling (77.5%). In both ARV and PrEP client groups, the CBO supported free HIV screening testing, accounting for a high proportion (more than 70%). However, only about 50% of ARV clients received counselling on prescription adherence, which was even lower in the group of PrEP clients (20.1%). ARV clients received a wider range of services than PrEP clients. Nevertheless, PrEP clients were given more emphasis by the CBO on PrEP treatment counselling (79.8%) as compared to HIV infection counselling (62.6%).

Table 2. Understanding of ARV and PrEP clients about services of Community Based Organizations (CBOs) in Ho Chi Minh city and Dong Nai Province in 2021 (n=690).

Variable[*]	**ARV[1] (n=335); (n, %)**	**PREP[1] (n=355); (n, %)**
Know about CBOs (Yes)	174 (51.9)	204 (57.5)
Get the support of CBOs (n=378) (Yes)	169 (97.1)	203 (99.5)
Services that clients received (multiple choice answers)		
Support for transfer of treatment	169 (100.0)	185 (100.0)
Transfer to confirmed testing facility	143 (84.6)	//
Psychological stability counseling	131 (77.5)	//
Free HIV1 screening test	123 (72.8)	156 (76.8)
Treatment adherence counseling	83 (49.1)	57 (20.1)
Distribution of condoms and lubricants	45 (26.6)	120 (59.1)
Provide self-testing	21 (12.4)	109 (53.7)
Support for transfer of treatment for comorbidities	11 (6.5)	4 (2.0)
Support to purchase health insurance	11 (6.5)	//
Support by medication delivery service	4 (2.4)	//
Guaranteed treatment	3 (1.8)	//
Paid screening tests	1 (0.6)	//
Support for prescriptions	1 (0.6)	//
PrEP treatment counseling	//	162 (79.8)
HIV1 infection counseling	//	127 (62.6)

[*]Collected *via* client response; //: Not applicable/No observation value
[1]Notes: ARV: Antiretroviral; PREP: Pre-Exposure Prophylaxis; HIV: Human Immunodeficiency Virus

Table 3 presents the satisfaction score of ARV and PrEP clients according to CSQ-8 scale for the CBO's services. The majority of clients were satisfied with the CBO's services. Also, PrEP clients had higher satisfaction scores than ARV clients. ARV clients reported that they will return to CBOs when they need assistance again, with the highest satisfaction score (3.7 ± 0.6). Meanwhile, the lowest satisfaction score was in the area of clients receiving the type of service they need, meeting their individual needs.

Table 3. Satisfaction score of ARV and PrEP clients according to CSQ-8 scale for the CBO's services in Ho Chi Minh city and Dong Nai Province in 2021 (n=378).

Characteristics	**ARV[a] (N=174)**		**PrEP[a] (N= 204)**	
	Mean ± SD[*]	**Max-min[**]**	**Mean ± SD[*]**	**Max-min[**]**
Overall assessment of service quality	3.4 ± 0.6	02-04	3.3 ± 0.6	02-Apr
Service to be provided	3.1 ± 0.7	01-04	3.5 ± 0.5	02-Apr
Meet individual needs	3.1 ± 0.6	01-04	3.4 ± 0.6	02-Apr
Recommendation to others who need support	3.6 ± 0.6	01-04	3.7 ± 0.4	03-Apr
Level of satisfaction with services	3.3 ± 0.9	01-04	3.2 ± 0.7	01-Apr
The service received helps to solve the problem	3.6 ± 0.5	03-04	3.8 ± 0.3	03-Apr
Overall rating of satisfaction	3.6 ± 0.5	03-04	3.4 ± 0.6	01-Apr
Find CBOs when you need support again	3.7 ± 0.6	01-04	3.8 ± 0.4	03-Apr
Average score of service provision satisfaction of CBOs	3.4 ± 0.6	01-04	3.5 ± 0.6	01-Apr

Note: 1. Very dissatisfied; 2. Dissatisfied; 3. Satisfied; 4. Very satisfied
[*]SD: Standard Deviation; [**]Max-Min: Maximum–Minimum
[a]Notes: ARV: Antiretroviral; PREP: Pre-Exposure Prophylaxis

Table 4 presents the clients perceived level of CBO's support for ARV and PrEP service. It was found that the CBO's support level for clients is quite high, averaging over 80%. In both ARV and PrEP treatment groups, the majority of clients believed that CBOs help clients with quick access to necessary services. Lastly, CBOs helped to provide motivation needed for clients to access and use health services, helping to reduce their anxiety and confusion.

Table 4. CBO's level of support for ARV and PrEP clients in Ho Chi Minh City and Dong Nai Province in 2021 (n=378).

Support from CBO	**ARV[a] (N=174)**		**PrEP[a] (N= 204)**	
	Mean ± SD[*]	**Max-Min[**]**	**Mean ± SD[*]**	**Max-Min[**]**
Motivation for accessing and using health services	90.8 ± 18.2	0-100	88.2 ± 13.1	16-100
Quick access to necessary services	90.8 ± 19.4	0-100	92.4 ± 10.2	50-100
Reducing anxiety and confusion	89.8 ± 20.4	0-100	90.4 ± 13.6	20-100

Better helping with treatment adherence	89.5 ± 21.1	0-100	84.8 ± 19.9	0-100
Peace of mind because you have a companion	88.6 ± 23.3	0-100	89.1 ± 15.3	0-100
* SD: Standard Deviation; **Max-Min: Maximum–Minimum [a]Notes: ARV: Antiretroviral; PREP: Pre-Exposure Prophylaxis.				

Table 5 shows the association between clients transferred by CBOs, walk in, and T-lymphocyte $CD4^+$count/stage of disease. The findings suggest that the odds for CD4 count being higher than 200 among those clients brought in by the CBOs were 1.98 times higher than those clients who directly walked in (p=0.031). Similar, the odds for being brought into the clinic during stage I of disease were 3.18 times more for those clients who directly walked in p=0.001.

Table 5. Bivariate analysis between clients who were transferred by CBOs and walk in for T-lymphocyte $CD4^+$count and stage of disease.

Characteristics	**CD4# > 200 (n=197) n (%)**	**CD4 ≤ 200 (n=54) n (%)**	**p value**	**OR[1] (CI 95%)**
CBO (126)	106 (53.8)	20 (37.0)	0.031	1.98 (1.07-3.68)
Walk in (125)	91 (46.2)	34 (63.0)		1
Characteristics	**Stage 1^ (n=290) n (%)**	**Other stages (n=45) n (%) n (%)**	**p-value**	**OR (CI 95%)[1]**
CBO (169)	154 (53.1)	12 (26.7)	0.001	3.18 (1.55-6.27)
Walk in (166)	136 (46.9)	33 (73.3)		1
[1]Logistic regression; OR: Odd Ratio; CI 95%; Confidence Interval 95%; #CD4 test results for the first time ^Clinical stage for the first time				

Discussion

The study aimed to assess the role of community based organizations in supporting ARV and PrEP before and during COVID-19 in Ho Chi Minh City and Dong Nai Provinces in Vietnam. The findings suggest that the strength of CBO engagement has a potential to increase the availability and utilization of HIV/AIDS related services, particularly in epidemic situations. The CBOs have an essential role in terms of early detection and transferring HIV clients to clinics on time. These findings support the international findings that CBOs add value to the national response to HIV/AIDS. This seems to be crucial in low and middle income countries, where the poorer population, less capacity to cope with HIV/AIDS. In the absence of other service providers, CBO engagement is particularly important in improving and supporting clients' reach to service availability and utilization at the community level. Most of the published literature on monitoring and evaluation of the CBOs is from high income countries. There have been limited attempts to present the findings from the evaluation of CBOs working in the low and middle income countries. Due to the resource constraints, such CBOs may find it challenging to document the effectiveness of their program [13-15].

The CBOs play a crucial role in context of care and management of HIV/AIDS. The self-initiative, knowledge, and acceptance of CBOs by the community and their relative cost effectiveness have been identified as factors that make them suitable as advocates and participants in HIV/ AIDS prevention program. Previous research has shown that the CBOs were able to offer support and help to find hard to reach populations and MSM. The CBOs are uniquely positioned to offer a bouquet of services to assist

in future. This research offers valuable information on the how CBOs play a role to offer resiliency in the setting of a public health emergency, such as the COVID-19 pandemic. There is no previously published literature from South Asia and Vietnam on this theme, which makes these findings important.

Conclusion

This study documented the role of CBOs in the HIV/AIDS program in the context of the COVID-19 pandemic in Ho Chi Minh City and Dong Nai provinces in Vietnam. The findings of the study highlight the key role played by the CBOs to facilitate clients in their seeking of care during the pandemic. There is a need to incorporate CBOs as a key stakeholder in the HIV/AIDS program in Vietnam going forward. The federal and provincial governments should leverage CBOs as a valuable resource to ensure that the HIV/AIDS program has a wider reach among the population in the country, and particularly among vulnerable and marginalized populations.

Declarations

Ethics approval and consent to participate

The study was approved by the Ethics Council of the University of Medicine and Pharmacy, Ho Chi Minh City, Decision No. 472/HDDD-DHYD, dated September 21, 2021.

Competing interests

The authors declare that they have no competing interests

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