

ORIGINAL RESEARCH

A qualitative study of the impact of coronavirus disease (COVID-19) on psychological and financial wellbeing and engagement in care among men who have sex with men living with HIV in Thailand

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Abstract

Objectives: The coronavirus disease (COVID-19) pandemic is an unprecedented event with massive global health and socio-economic impacts on vulnerable populations, especially people living with HIV. The epidemic has severely affected Thailand's economy and potentially impacted the financial and psychological wellbeing of Thai HIV-positive men who have sex with men (MSM).

Methods: Between 15 June and 10 December 2020, we conducted qualitative interviews with 26 MSM living with HIV in Thailand who participate in an Adam's Love We Care Study. We intentionally recruited individuals who may have experienced a greater impact of COVID-19. Interviews explored worry, stigma and stress surrounding COVID-19, and multiple domains of potential COVID-19 impact: financial/employment, HIV service delivery and antiretroviral (ART) adherence during the first 10 months of the COVID-19 pandemic.

Results: Participants perceived themselves as immunocompromised and susceptible, and feared contracting COVID-19. Participants worried that contracting COVID-19 would lead to HIV status disclosure and stigmatization. Participants had considerable worry about job loss as a result of the economic downturn, and some shared challenges associated with relocation and re-engaging with HIV care. Financial stress and lack of basic necessities caused by job losses were commonly reported. Participants reported optimal ART adherence as a consequence of local HIV service delivery responses, convenient ART refills and Adam's Love online support interventions.

Conclusions: Our study highlights that the COVID-19 pandemic produced high levels of anxiety and concerns about additional stigma among MSM living with HIV. It had a significant negative effect on the daily lives of our participants. These findings indicate a need for the provision of confidential COVID-19 diagnosis and care, relief programmes, vaccination roll-out equity, and addressing employment needs of vulnerable populations.

KEYWORDS

coronavirus disease (COVID-19), economic disparities, men who have sex with men, people living with HIV, severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2)

INTRODUCTION

The 2019 coronavirus disease (COVID-19) pandemic is an unprecedented event with massive global health and socio-economic impacts on vulnerable populations, especially people living with HIV (PLHIV) who are already disadvantaged by comorbidity, stigma and marginalization.^{1,2} Thailand was among the first countries to report a confirmed COVID-19 case outside of China.^{3,4} Thailand's proactive lockdowns succeeded in containing the virus during the first wave of the outbreak, with a low fatality rate of 1.46% by May 2020.⁵ However, the Thai economy has been severely affected by the lockdowns because of its dependence on exports and foreign tourism.⁶ The tourism sector accounts for 20% of the country's gross domestic product (GDP) and employs a large number of Thais, including men who have sex with men (MSM), transgender women (TGW), sex workers and other communities living with HIV.^{3,7} Of an estimated 8.3 million workers affected by employment loss caused by COVID-19, around 2.5 million (30.1%) are in the tourism sector.^{6,8} Over 23 000 entertainment venues across the country were closed.⁹ A recent Joint United Nations Programme on HIV/AIDS (UNAIDS) rapid assessment reported 91% of sex worker respondents becoming unemployed as a result of the pandemic.¹⁰

Since 2010, Adam's Love web-based interventions (www.adamslove.org) have successfully engaged Thai MSM and TGW in HIV prevention and treatment cascades through their novel online-to-offline (O2O) models.¹¹⁻¹³ Data from the Adam's Love We Care study¹⁴ reveal that over one-third of its MSM participants with HIV are employed by the tourism sector, for example in hotels, shopping malls, entertainment venues, airlines and airports. The Adam's Love intervention provides a practical means of exploring the impact of COVID-19 on a hard-to-reach population. Instant messaging and online chat with MSM participants in the Adam's Love We Care study provided anecdotal evidence of the high negative impact of the pandemic.

Overall health outcomes of MSM with HIV could be adversely affected by the potential interactions between COVID-19 and HIV, and the impact of the pandemic on stigma, isolation, fear and anxiety.¹⁵ Understanding such impacts on the HIV care and wellbeing of MSM living with HIV could emphasize the need for appropriate or even different HIV care services and online and offline support interventions. This study assessed the impact of

COVID-19 on psychological and financial wellbeing and engagement in care among Thai HIV-positive MSM participants, and explored how Adam's Love We Care might have influenced these outcomes.

METHODS

Study settings and participants

This substudy is a part of the Adam's Love We Care study conducted by the Adam's Love Global (ALGO) Foundation for MSM and Transgender Health (www.adamslove.org). The objective of the Adam's Love We Care study is to improve clinic visit retention and antiretroviral therapy (ART) adherence outcomes through individualized eCounselling, educational video sessions, facilitation of early linkage to ART, daily timely personalized ART reminders and clinic visit retention reminders.^{14,16} The current substudy assessed the perceived and actual impacts of COVID-19 among Thai MSM living with HIV who were members of the Adam's Love network. We specifically recruited participants from the ongoing Adam's Love We Care study who were located across Thailand. Those recruited to participate either (1) had regular interactions with eCounsellors or (2) proactively responded to the daily personalized ART reminders confirming medication intake.

From 15 June to 10 December 2020, we approached 35 MSM participants in the study via the eCounselling platform, of whom nine participants did not respond to the message or declined the invitation. After receiving permission from interested participants, study staff contacted via telephone and scheduled to interview 26 MSM participants. We intentionally enriched the sample with nine participants (9 of 26) who had expressed to eCounsellors that they had experienced COVID-19-related challenges and who were more likely to have negative COVID-19 impacts, to explore the range and perceived seriousness of the impacts.

During the first wave of the COVID-19 outbreak, the public health and media agencies released some potentially identifiable information on COVID-19 cases such as gender, age, location, occupation and workplace. In some cases, for example for public personalities, names and a detailed log of their movements before they tested positive for COVID-19 were announced. Furthermore, the

government's proactive contact tracing programme collected personal information (including phone numbers, which are linked to national identity cards).¹⁷

HIV care providers at the provincial level adopted various safety measures and practices during the COVID-19 outbreak,^{3,18} such as home ART delivery, use of drive-through booths and fast-track services to ensure ART refill among PLHIV. To support our study participants during the COVID-19 pandemic, Adam's Love staff worked closely with the HIV care providers in various provinces in Thailand to develop resources for disseminating information on evolving HIV service delivery changes,¹⁹ and harnessed real-time support interventions, for example eCounselling sessions, online linkage support, personalized ART and clinic visit reminders, to address individual challenges and ensure seamless ART linkage during the COVID-19 outbreak.

Between 1 February and 31 December 2020, the eCounselling platform addressed over 180 inquiries from study participants on topics including referral advice and assistance regarding health insurance and HIV clinic relocation, and details about ART refill procedures and the clinic visit schedule during the COVID-19 outbreak. The eCounsellors also provided psychosocial support and promoted emotional wellbeing, which helped the MSM

overcome stress, and motivated them to stay healthy and positive in the COVID-19 lockdown period.

This substudy is a part of the Adam's Love We Care study protocol approved by the Institutional Review Board (IRB) of the Faculty of Medicine, Chulalongkorn University, Bangkok, Thailand (IRB No. 602/58). All participants provided informed consent to participate in the main study and gave permission for audio-recording before commencement of the interview. Each received a USD \$30 gift voucher as compensation.

Data collection

In-depth semi-structured interviews were conducted either via telephone or in person by team members (CN and TA). Interviews lasted approximately 30–45 min and were audio-recorded with participants' permission. The interview guide was utilized to structure all interviews with prompts to elicit exploration of topics (Table 1). Demographic data collected included the subject's age, location and educational attainment. Level of fear of COVID-19 was measured by a verbally administered numeric rating scale (NRS) ranging from 0 to 10. This self-report scale is commonly used for assessment of pain intensity and was adopted to measure the

TABLE 1 Summary of the interview guide assessing perceived and experienced impacts of coronavirus disease (COVID-19)

Domain	Descriptions and key interview questions
(1) Response to COVID-19 and impact on daily lives	Perceived COVID-19 impact, fear of COVID-19, COVID-19 prevention strategies, and life changes resulting from COVID-19. Sample questions: What are your thoughts and feelings about the COVID-19 pandemic? How has your daily life been impacted by the COVID-19 pandemic and the national lockdown? How do you prevent yourself getting COVID-19?
(2) Impact on work and economic situation	Changes in occupation and monthly income at the time of the interview compared with the pre-COVID-19 period, resulting financial impact and economic challenges faced, and participants' perspective on revival of their financial conditions and Thailand's projected economic recovery to the pre-COVID-19 pandemic level. Sample questions: What are the challenges in your employment resulting from COVID-19? How do you cope with changes in your work and life? What are other financial challenges faced by you as a result of COVID-19?
(3) HIV service delivery	Clinic visit retention and ART adherence impact. Sample questions: What are the challenges of and barriers to timely ART refill, ART adherence and making clinic visits during the COVID-19 pandemic? How do you communicate with your health care providers during the national lockdown?
(4) Impact of Adam's Love online support intervention during the COVID-19 pandemic	Impact of Adam's Love interventions, e.g. daily personalized ART reminders and real-time eCounselling support, in reducing COVID-19-related anxiety and addressing ART and retention challenges. Sample questions: How did Adam's Love support help with maintaining ART adherence, retention in care, and psychosocial wellbeing during the COVID-19 outbreak?

Note: Broad domains and key interview questions are shown. Unstructured follow-up probes were used to further explore points as they arose during the interview.

Abbreviation: ART, antiretroviral therapy.

degree of fear in this study. The participants were asked to rate their fear of COVID-19 infection on a scale categorized as follows: 0 for no fear, 1–3 for mild fear, 4–6 for moderate fear, 7–9 for severe fear and 10 for extreme fear.^{20,21}

Data analysis

All interviews were conducted in Thai, recorded and transcribed in Thai and then translated into English. Descriptive statistics were used to describe the demographics of the participants. We used an inductive thematic analysis approach given the lack of literature on the impact of COVID-19 on MSM living with HIV. Transcripts were independently reviewed by two investigators (CN and TA). At the 23rd interview, we found repetition in the interview suggesting saturation. Interviews were continued with three additional participants to assure that no new themes were emerging from the data.

A coding frame was developed after data immersion. Transcripts were coded by CN and TA, using a matrix in Microsoft EXCEL (v. 2019) to identify patterns and categories. All data were double-coded and any discrepancies identified during this process were resolved through discussion. After the discussion and consensus, the two investigators interpreted the data through conceptualization into themes and subthemes based on the relationship between codes and frequencies of theme endorsement by the participants. All authors discussed and confirmed the implications of the findings.

RESULTS

A total of 26 MSM participants living with HIV were interviewed. The median age was 29 [interquartile range (IQR) 27–30] years and most (21 of 26) reported having a suppressed HIV viral load. Half of the participants (13 of 26) worked in the tourism industry, with 12 of 13 living in tourism-reliant Thai provinces (defined as provinces with the highest-ranking income earned from foreign tourism). Among the 26 participants, nine participants had recently relocated as a consequence of job losses. Of these nine participants who relocated, six migrated their HIV clinics to a new province and changed their health care insurance coverage from a compulsory health insurance for private sector employees under the Social Security Scheme to the Universal Coverage Scheme (the government's 30-Baht Scheme). The number of participants with < \$300 monthly income increased from four participants prior to the COVID-19 outbreak to 13 at the time of the interview (Table 2).

The interview data revealed three primary themes, including: (1) anxiety related to COVID-19, including fear

of contracting COVID-19 and concern about HIV status disclosure, (2) anticipated and experienced impact of COVID-19 on employment, financial health and relocation, and (3) impact of COVID-19 on HIV service delivery and ART refill and clinic visit retention.

Worry and anxiety about the COVID-19 pandemic

MSM participants living with HIV expressed high levels of fear and anxiety about the COVID-19 pandemic, with a median score of 8 out of a maximum score of 10 (IQR 5–9) on a verbally administered NRS. Interview data revealed two subthemes pertaining to different dimensions of anxiety: (1) fear and worry about their own health and their weakened immune status, and fear of contracting COVID-19, and (2) fear of HIV status disclosure and the stigma surrounding this.

Fear of COVID-19 and having an impaired immune response and self-perceived likelihood of contracting COVID-19

More than half of the participating MSM living with HIV (15 of 26) perceived themselves to be immunocompromised and vulnerable to the COVID-19 epidemic and feared being exposed to and contracting COVID-19. Participants adopted stringent personal hygiene and precautionary measures to help overcome their fears of COVID-19 and concerns about their health.

For example, one participant described how his fear increased based on having a known COVID-19 case at work.

I experienced extreme anxiety and fear during COVID-19 mostly due to personal health reasons and since I have low immunity. A colleague at my office got infected with COVID-19, which made me even more concerned.

(30-year-old MSM working in downtown Bangkok)

Participants were especially concerned that their body's immune response to the novel coronavirus might be compromised. One participant shared the following.

I felt paranoid and fearful mostly because I'm not a healthy person and have HIV virus in my body. My work involves meeting foreigners so I'm even more at risk.

(42-year-old MSM)

TABLE 2 Demographic characteristics of a qualitative sample of 26 Thai men who have sex with men (MSM) living with HIV ($n = 26$)

Demographic characteristics	
Age (years) [median (IQR)]	29 ([27–30])
Location [n (%)]	
Bangkok	5 (19.2)
Tourism-reliant provinces other than Bangkok ^a	12 (46.2)
Other provinces (in the central, northeast and west of Thailand)	9 (34.6)
City relocation [n (%)]	
Yes	9 (34.6)
No	17 (65.4)
Change of health insurance coverage and HIV clinic relocation as a result of COVID-19 impact [n (%)]	
Yes	6 (23.1)
No	20 (76.9)
Education [n (%)]	
High school or lower	4 (15.4)
Bachelor's degree or higher	22 (84.6)
Occupation (prior to the COVID-19 pandemic) [n (%)]	
Tourism and service sector (e.g. hotels, airlines, airports, tours, malls, cinemas and entertainment venues)	13 (50)
Other employment (e.g. private and government sector)	11 (42.3)
Student	2 (7.7)
Monthly income (in 2019, prior to the COVID-19 pandemic) [n (%)]	
< \$300	4 (15.4)
\$300–1000	14 (53.8)
> \$1000	8 (30.8)
Monthly income (during the COVID-19 pandemic at the time of the interview) [n (%)]	
< \$300	13 (50)
\$300–1000	9 (34.6)
> \$1000	4 (15.4)
Suppressed viral load (< 50 copies/mL) [n (%)]	21 (80.8)

Abbreviation: IQR, interquartile range.

^aTourism-reliant provinces in Thailand were defined as those that ranked highest in terms of income earned from foreign tourism and included Bangkok, Phuket, Krabi, Surat Thani, Chonburi, Chiang Mai, Phang Nga, Prachuap Khiri Khan, Trat and Rayong.

Source: Tourism Statistics (classify by region and province, 2020), Ministry of Tourism and Sports, Thailand.

Another participant noted:

When I read that over 100 000 people have died from COVID-19 in the US, I felt scared and avoided crowded places because I have a chronic disease.

(29-year-old MSM)

Fear of HIV status disclosure and stigma surrounding it if diagnosed with COVID-19

Thai public health measures and practices were described as creating anxiety, as MSM participants were

afraid of disclosing their HIV status if they contracted COVID-19 and were worried that the information would be released to colleagues, employers or the public, and therefore limited their movements. One participant noted:

I felt extremely scared, and paranoid. I didn't dare to go anywhere. If I contracted COVID-19, the local authorities would make public announcement and my details would appear in headlines, and people will know my HIV status. I often consulted with Adam's Love for support during this time.

(30-year-old MSM)

The impact of COVID-19 on the economy, employment and relocation because of work

Financial stress and lack of basic necessities as a consequence of job losses or reductions in salaries were highlighted in interviews by 19 of the 26 participants. As one participant noted:

I haven't worked for 5 months, and skipped meals to pay for my rent and utilities. The stress from COVID-19 has impacted me personally on a daily level so I avoid eating during daytime. Every day I get up and check on which hotels and restaurants are open and knock on each hotel door asking for a job in the area. I haven't been successful yet.

(21-year-old MSM based in a major tourist area)

The virus itself is not stressful, but no income is the real stress. Hotels are closed and staff are fired.

(24-year-old MSM working in a major tourist area)

Almost half of participants (12 of 26) shared their expectation of a grim long-term outlook with regard to personal life and economic recovery to pre-COVID-19 levels and highlighted their hopes of a vaccine as a key factor for the country's economic revival. One participant noted:

If there is no vaccine, people will not be confident in tourism. We need foreign tourists back; they are main income source for [tourist area], only then can we survive. I think revival will take around 2–3 years.

(24-year-old MSM)

Stress and trauma of unemployment and related challenges faced by MSM living with HIV

Participants constantly worried about losing their jobs during the epidemic. MSM participants highlighted their experiences of becoming unemployed.

In the beginning I didn't think it would be me. If you received a call from the hotel employer to meet them, it meant you are probably going to be fired. Every time someone was

asked to leave, the hotel security guard would accompany them. I felt awful.

(30-year-old MSM)

One participant accepted reduced pay and decided not to relocate in search of work, fearing that mandatory HIV testing may be required by a new employer. He noted:

The hotel that I work for doesn't require mandatory HIV testing. If I go back home, and restart, it is very difficult, as they all require mandatory HIV testing and I am afraid of HIV status disclosure and not getting a job.

(35-year-old MSM based in a major tourist area)

Relocation as a result of the COVID-19 pandemic in search of job opportunities or moving back to live with parents

One-third of participants (nine of 26) located in provinces outside Bangkok relocated to a new province in search of job opportunities or moved back to live with their parents.

After being fired, I decided to leave [major tourist area] and return home, mostly because I have a chronic disease (HIV). I quarantined at my house. The nurse, chief of the village, and staff (total three people) visited my house, and asked me to stay in a separate room in the house with a separate toilet (to comply with the government's restrictions on interprovincial travel amid COVID-19 controls). They would come to give me food and drinks.

(42-year-old MSM)

My workplace was closed due to COVID-19, so I decided to come back to my childhood home in another province and live with my family as an unemployed person. I still don't know what to do next, so I have to rely on my parents for now.

(29-year-old MSM)

Impact of COVID-19 on HIV service delivery, ART adherence, ART refill and clinic visit retention

Participants universally appreciated local- and provincial-level HIV service delivery changes during the COVID-19 epidemic, especially extended help and home delivery and

mailing options offered by health care providers for ART refill and fast-track services to avoid overcrowding at clinics.

I had less than a month's pills left with me and my HIV clinic contacted me offering to send the medicine via the postal service. I immediately agreed and waited for the package to arrive. When I opened it, the medicine package was camouflaged and well wrapped.

(30-year-old MSM based in central Thailand)

Conversely, some participants felt reluctant to choose the home delivery and mailing options because of fear of HIV status disclosure, and opted for a fast-track service for ART refill at the clinic.

I felt scared of the idea of receiving HIV medication via post. I remember an incident in the news when the postman opened someone's package, and I thought if they opened my package and found out my HIV status, they would be disgusted with me and my family.

(29-year-old MSM based in Bangkok)

Six participants who received fast-track ART services (six of 26) shared their positive attitudes and experiences with efficient clinic visit procedures. As one participant noted:

The clinic scheduled limited numbers of people, so the place was not crowded, and they maintained social distancing and all preventive measures. The procedure was very smooth and fast. I could finish all procedures and received my medication within an hour.

(30-year-old MSM based in Bangkok)

Two participants living in remote provinces (two of 26) expressed concern that there would be inadequate supplies of HIV medicines and possibly disrupted supply chains as a consequence of the intensive response focusing on COVID-19, national lockdowns, and transportation restrictions.

What concerned me most was regarding HIV medication stock in Thailand. I was afraid Thailand would run out of medication doses. What if they close the country and borders, including shipping, would that deplete the ART stock? With HIV virus in my body, I cannot live without medicine. I fear we would be forced to miss the dose.

(27-year-old MSM based in northeast Thailand)

A positive impact of the Adam's Love online support intervention was expressed by the participants. The majority of participants (18 of 26) took advantage of the real-time eCounselling support regarding health care insurance and HIV clinic relocation assistance, ART refill and clinic scheduling, COVID-19 prevention advice, and psychosocial support during the COVID-19 pandemic, and six (of 18) proactively shared how having access to Adam's Love online support and regular interactions with eCounsellors during the lockdown period helped reduce their stress and lessened the negative impact of isolation.

DISCUSSION

The study explored the perceived and experienced impacts of COVID-19 among Thai MSM living with HIV participating in the Adam's Love We Care study. Our findings are summarized under three themes: (1) anxiety related to COVID-19, (2) the impact of COVID-19 on employment and financial wellbeing, and (3) the impact of COVID-19 on HIV service delivery.

Our study results show that anxiety among participants was related to perceptions about the personal risk of contracting COVID-19. Participants considered themselves to be immunocompromised and less healthy, and had high levels of fear of being exposed to and contracting COVID-19. These results are similar to the high levels of fear, anxiety and stress about COVID-19 infection found among PLHIV in Spain and Turkey.^{22,23}

Stigma in the COVID-19 context requires consideration as it may lead to poorer mental health outcomes.^{24,25} Government requirements on sharing of personal information through a contact-tracing app and local public announcements sharing the details of people contracting COVID-19^{26,27} led to a perceived fear of the stigma of HIV status disclosure among our study participants, who worried about being identified as a PLHIV if they contracted COVID-19. This finding suggests a critical need for changes in Thailand's COVID-19 crisis management to ensure confidentiality and anonymity of persons diagnosed with COVID-19.

The most common and most serious impact of COVID-19 was adverse socio-economic consequences. These consequences increased stress, affected food security, and negatively impacted participants' quality of life. A related finding is that PLHIV experienced job insecurity and unemployment. These results are consistent with emerging perspectives from Malaysia and the European Union labour markets, for which the impact of COVID-19 will probably be concentrated among the most vulnerable populations.^{28,29}

Fear of mandatory HIV testing by potential employers limited some participants' job opportunities and added to their anxiety. In Thailand, mandatory HIV testing during the application process is particularly prevalent in hospitality and food services and some government jobs. The Thai Labour Ministry report confirms our findings that up to 30% of PLHIV have reported experiencing discrimination by employers on the basis of their HIV status.³⁰

The Bank of Thailand foresees that the tourism industry will recover towards the first quarter of 2023.³¹ This slow pace of recovery will challenge our participants' hopes for a return to their normal lives after a successful global vaccination programme. By April 2021, only 0.2% of the Thai population had received at least one dose of a COVID-19 vaccine.^{32,33} Given the lack of a clear COVID-19 vaccine procurement and roll-out plan, the current situation of economic disparities and challenges faced by vulnerable groups could persist for years.

MSM living with HIV who participated in our study reported adequate access to ART and stated that they were able to maintain optimal ART adherence during the COVID-19 epidemic. ART adherence was also facilitated by their desire to maintain healthy and strong immunity. HIV service delivery measures by the Thai health care system, including home ART delivery, use of drive-through booths, and fast-track ART pick-up services, helped our participants to maintain their HIV care. Our data suggest no withdrawal of care as a consequence of the impact of COVID-19. This is in contrast to recent studies where the fear of contracting COVID-19 was found to have led to decreased engagement with care among PLHIV in several countries in Europe and Africa.^{22,34-37} Two participants' perceived concerns regarding a possible shortage of ART medications as a result of national lockdowns and transportation restrictions and the ability to continue ART procurement in the country were similar to the findings of a study in Central and Eastern Europe.³⁵

Having access to real-time support was an important aspect of support for the Adam's Love study participants to help them cope with anxiety and worry and acquire reliable, adequate details about ART refill and relocation during the pandemic. The ongoing relationship and trust built between Adam's Love and the study participants shed light on the impact of disruptive events like COVID-19 on this particular population. Evidence of the impact of such online interventions in scaling up HIV testing, treatment and pre-exposure prophylaxis (PrEP) uptake^{11,12,38,39} and reducing HIV risk behaviours⁴⁰ has previously been obtained. These ongoing networks and the data obtained through them are informative for Adam's Love and for stakeholders in terms of understanding the emerging needs of PLHIV and emphasize the need for appropriate

and innovative online and offline HIV care support interventions during the COVID-19 crisis.

LIMITATIONS

This study reports the impact of COVID-19 on vulnerable populations during the first 10-month wave of the COVID-19 outbreak in Thailand. Additional research is needed to explore COVID-19 impacts on MSM individuals over time. Although the national reach of the Adam's Love programme facilitated enrolment of participants from different provinces of Thailand, this study was not designed to obtain generalizable data. Furthermore, because the study recruited participants receiving an ongoing online intervention, the participants were likely to be more engaged in care and more likely to be ART adherent. We intentionally enriched the sample for participants who experienced some problems associated with COVID-19 (nine of the 26 participants) to allow characterization of the type and severity of impacts of COVID-19. Future studies are needed to assess the frequency of specific COVID-19 impacts among PLHIV in Thailand. However, this is an important study given the lack of data on the impact of COVID-19 on MSM living with HIV.

CONCLUSIONS

Our study highlights that the COVID-19 pandemic resulted in high levels of anxiety and concern about additional stigma among MSM living with HIV. A positive finding in our participants is that COVID-19 did not significantly impact ART adherence in the short term. The pandemic is causing considerable economic worry and negative economic impact. These findings suggest that there is a need for provision of confidential and stigma-free COVID-19 diagnosis and care, immediate economic relief programmes and government policies aimed at vaccination roll-out equity, and for addressing employment needs of vulnerable populations.

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CONFLICTS OF INTEREST

The authors have no conflicts of interest to declare.

AUTHORS' CONTRIBUTIONS

CN and TA conducted data collection and analysis. CN assumed primary responsibility for writing and revising the manuscript. All authors contributed to conceptualization, interpretation of the findings and drafting of the manuscript. All authors edited and reviewed the manuscript and gave their final approval for submission to the journal.

DISCLAIMER

The content and views in this work are solely the responsibility of the authors and do not necessarily represent the views or policies of the US Army and the US Department of Defense.

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REFERENCES

- International Labour Organization (ILO). *COVID-19 and the World of Work: A Focus on People Living with HIV*. ILO; 2020. Available at: https://www.ilo.org/global/topics/hiv-aids/publications/WCMS_747263/lang-en/index.htm. Accessed June 6, 2021.
- Weerasuria M, Ko C, Ehm A, et al. The impact of the COVID-19 pandemic on people living with HIV in Victoria, Australia. *AIDS Res Hum Retroviruses* 2021; 37: 322-328.
- Oxford Policy Management Limited. *Social Impact Assessment of COVID-19 in Thailand*. United Nations Thailand, 2020. Available at: <https://www.unicef.org/thailand/reports/social-impact-assessment-covid-19-thailand>. Accessed June 6, 2021.
- Dechsupa S, Assawakosri S, Phakham S, Honsawek S. Positive impact of lockdown on COVID-19 outbreak in Thailand. *Travel Med Infect Dis* 2020; 36: 101802.
- Rajatanavin N, Tuangratananon T, Suphanchaimat R, Tangcharoensathien V. Responding to the COVID-19 second wave in Thailand by diversifying and adapting lessons from the first wave. *BMJ Glob Health* 2021; 6: e006178.
- World Bank Group. *Thailand Economic Monitor: Thailand in the Time of COVID-19*. World Bank Group; 2020. Available at: <https://documents1.worldbank.org/curated/en/456171593190431246/pdf/Thailand-Economic-Monitor-Thailand-in-the-Time-of-COVID-19.pdf>. Accessed June 6, 2021.
- Al Jazeera News Agencies. *Tourism Slump Sends Thai Economy into Tailspin*. Al Jazeera, Aug 17, 2020. Available at: <https://www.aljazeera.com/economy/2020/8/17/tourism-slump-sends-thai-economy-into-tailspin>. Accessed June 6, 2021.
- Worrachaddejchai D Council hints at layoffs: Bangkok Post, Apr 17, 2021. Available at: <https://www.bangkokpost.com/business/2100879/council-hints-at-layoffs>. Accessed June 6, 2021.
- Post Reporters Entertainment closures to go nationwide. Bangkok Post, Mar 21, 2020. Available at: <https://www.bangkokpost.com/thailand/general/1883225/entertainment-closures-to-go-nationwide>. Accessed June 6, 2021.
- Janyam S, Phuengsamran D, Pangnongyang J, et al. Protecting sex workers in Thailand during the COVID-19 pandemic: opportunities to build back better. *WHO South-East Asia Journal of Public Health* 2020; 9 (2): 100-103. World Health Organization. Regional Office for South-East Asia, 2020. Available at: <https://apps.who.int/iris/handle/10665/334191>. Accessed June 6, 2021.
- Anand T, Nitpolprasert C, Trachunthong D, et al. A novel Online-to-Offline (O2O) model for pre-exposure prophylaxis and HIV testing scale up. *J Int AIDS Soc* 2017; 20: 21326.
- Anand T, Nitpolprasert C, Ananworanich J, et al. Innovative strategies using communications technologies to engage gay men and other men who have sex with men into early HIV testing and treatment in Thailand. *J Virus Erad* 2015; 1: 111-115.
- Anand T, Nitpolprasert C, Phanuphak N. Online-to-offline models in HIV service delivery. *Curr Opin HIV AIDS* 2017; 12: 447-457.
- Anand T, Saengow P, Fungfoo K, Guistino S & Nitpolprasert C Adam's Love 7-milestones positive journey map: a novel online-to-offline (O2O) HIV care strategy for early linkage to treatment and optimal retention in care among Thai HIV-positive MSM (Abstract MOPEd637). 10th IAS Conference on HIV Science, July, 2019, Mexico City, Mexico. Available at: <https://programme.ias2019.org/Abstract/Abstract/512>. Accessed June 6, 2021.
- Shiau S, Krause KD, Valera P, Swaminathan S, Halkitis PN. The burden of COVID-19 in people living with HIV: A syndemic perspective. *AIDS Behav* 2020; 24: 2244-2249.
- Anand T, Nitpolprasert C, Kerr SJ, et al. A qualitative study of Thai HIV-positive young men who have sex with men and transgender women demonstrates the need for eHealth interventions to optimize the HIV care continuum. *AIDS Care* 2017; 29: 870-875.
- Hicks W Thai COVID-19 apps judged invasive. Bangkok Post, Jul 20, 2020. Available at: <https://www.bangkokpost.com/business/1954287/thai-covid-19-apps-judged-invasive>. Accessed June 6, 2021.
- Thai Network of Positive People (TNP+). *Role of the Continuum of Care Center, CCC and TNP+ in the Response to the COVID-19 Pandemic*. TNP+, 2020. Available at: https://makemedicinesafordable.org/wp-content/uploads/2021/03/TNPandCOVID-19_ENG.pdf. Accessed June 6, 2021.
- Adam's Love Adam's Love YouTube channel: Adam's Love, Thailand, 2020. Available at: <https://www.youtube.com/user/AdamsLoveThailand/videos>. Accessed June 6, 2021.

20. Bijur PE, Latimer CT, Gallagher EJ. Validation of a verbally administered numerical rating scale of acute pain for use in the emergency department. *Acad Emerg Med* 2003; 10: 390-392.
21. Lu W, Wang H, Lin Y, Li L. Psychological status of medical workforce during the COVID-19 pandemic: a cross-sectional study. *Psychiatry Res* 2020; 288: 112936.
22. Ballester-Arnal R, Gil-Llario MD. The virus that changed Spain: impact of COVID-19 on people with HIV. *AIDS Behav* 2020; 24: 2253-2257.
23. Kuman Tunçel Ö, Pullukçu H, Erdem HA, Kurtaran B, Taşbakan SE, Taşbakan M. COVID-19-related anxiety in people living with HIV: an online cross-sectional study. *Turk J Med Sci* 2020; 50: 1792-1800.
24. Waterfield KC, Shah GH, Etheredge GD, Ikhile O. Consequences of COVID-19 crisis for persons with HIV: the impact of social determinants of health. *BMC Public Health* 2021; 21: 299.
25. World Health Organization (WHO). *Mental Health and Psychosocial Considerations During the COVID-19 Outbreak*. WHO; 2020. Available at: <https://apps.who.int/iris/handle/10665/331490>. Accessed June 6, 2021.
26. COFACT Thailand. *Privacy Rights in the Thai Context*. COFACT, Mar 13, 2021. Available at: <https://blog.cofact.org/privacy-rights-thai-context/>. Accessed June 6, 2021.
27. Ramasoota P As cases rise, so should awareness. Bangkok Post, Apr 16, 2021. Available at: <https://www.bangkokpost.com/opinion/opinion/2100311/as-cases-rise-so-should-awareness>. Accessed June 6, 2021.
28. Sibon P Worst of COVID-19's impact will be felt by Malaysia's most vulnerable. *dayakdaily*, Oct 29, 2020. Available at: <https://dayakdaily.com/worst-of-covid-19s-impact-will-be-felt-by-malaysias-most-vulnerable/>. Accessed June 6, 2021.
29. Joint Research Centre. *The Impact of COVID Confinement Measures on EU Labour Market*. European Union, 2020. Available at: https://ec.europa.eu/jrc/sites/default/files/jrc.120585_policy_brief_impact_of_covid-19_on_eu-labour.market.pdf. Accessed June 6, 2021.
30. Charoensuthipan P. Govt urges end to HIV testing at workplaces. Bangkok Post, Dec 1, 2020. Available at: <https://www.bangkokpost.com/thailand/general/2028415/govt-urges-end-to-hiv-testing-at-workplaces>. Accessed June 6, 2021.
31. Sriring O & Staporncharnchai S Thai economy may take until early 2023 to normalise: Reuters, May 31, 2021. Available at: <https://www.reuters.com/article/thailand-economy-idINL2N2NI068>. Accessed June 6, 2021.
32. Mathieu E, Ritchie H, Ortiz-Ospina E, et al. A global database of COVID-19 vaccinations. *Nat Hum Behav* 2021; 5 (7): 947-953.
33. FT Visual and Data Journalism Team. COVID-19 vaccine tracker: the global race to vaccinate. Financial Times, Apr 25, 2021. Available at <https://ig.ft.com/coronavirus-vaccine-tracker/?areas=gbr&areas=ISR&areas=USA&areas=EUE&cumulative=1&populationAdjusted=1>. Accessed April 25, 2021.
34. Prabhu S, Poongulali S, Kumarasamy N. Impact of COVID-19 on people living with HIV: A review. *J Virus Erad* 2020; 6: 100019.
35. Kowalska JD, Skrzat-Klapaczyńska A, Bursa D, et al. HIV care in times of the COVID-19 crisis - where are we now in Central and Eastern Europe? *Int J Infect Dis* 2020; 96: 311-314.
36. Ponticello M, Mwanga-Amumpaire J, Tushemereirwe P, Nuwagaba G, King R, Sundararajan R. "Everything is a mess": how COVID-19 is impacting engagement with HIV testing Services in rural southwestern Uganda. *AIDS Behav* 2020; 24: 3006-3009.
37. Lodge W, Kuchukhidze S. COVID-19, HIV, and migrant workers: the double burden of the two viruses. *AIDS Patient Care STDS* 2020; 34: 249-250.
38. Phanuphak N, Anand T, Jantarapakde J, et al. What would you choose: Online or Offline or Mixed services? Feasibility of online HIV counselling and testing among Thai men who have sex with men and transgender women and factors associated with service uptake. *J Int AIDS Soc* 2018; 21 (Suppl 5): e25118.
39. Anand T, Nitpolprasert C, Kerr SJ, et al. Implementation of an online HIV prevention and treatment cascade in Thai men who have sex with men and transgender women using Adam's Love Electronic Health Record system. *J Virus Erad* 2017; 3: 15-23.
40. Anand T, Nitpolprasert C, Jantarapakde J, et al. Implementation and impact of a technology-based HIV risk-reduction intervention among Thai men who have sex with men using "Vialogues": a randomized controlled trial. *AIDS Care* 2020; 32: 394-405.

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