

What's trending in Asia? Drawing inferences from online HIV support seeking patterns of risk groups in Asia using regional Adam's Love and TemanTeman.org big datasets



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BACKGROUND

Data on online HIV support seeking behaviors provide real-time, highly accurate estimation of HIV epidemic, outbreak conditions, and offer proactive data-driven insights into individual support needs. To inform robust HIV prevention interventions targeting risk groups, we harnessed Adam's Love regional datasets.

METHODS

Big data gathered between September 2011–December 2019 were extracted and analyzed from www.adamslove.org and www.temanteman.org regional websites in Thailand, Indonesia, Malaysia, Taiwan and South Korea. Data captured risk demographics and country-specific HIV support seeking patterns in Asia.



Fig 1. Online HIV health seeking patterns of at risk groups. Model adopted from Choo et al. (2000), Ellis (1989), and Anand et al. (2017)

RESULTS

The hybrid data from 13.6 million users included search trends on Adam's Love and TemanTeman.org websites (>8 Million users), YouTube (>5 Million viewers), eCounseling platforms (>75,000 inquiries) and social media channels (>160,000 followers). Adam's Love and Temanteman.org videos featuring medical doctors from Asia's leading university hospitals garnered nearly 5.24 million views, watch-time 10.3 Million minutes (equivalent to 19 years, 161 days), primarily via mobile phones (72%), computers (20%) and tablets (8%). Indonesia and Thailand had approx. 35% of youth (aged 13-24 years) engaged in HIV support seeking, while 25-34 year group engagement was higher (>60%) in Malaysia, Taiwan and South Korea. Thailand and Indonesia saw relatively higher female engagement in online sexual health seeking with male/female ratio of 68:32, compared with predominantly male HIV support seeking in Malaysia (80:20) and Taiwan (90:10).

Adam's Love & TemanTeman.org	Thailand	Indonesia	Malaysia	Taiwan	South Korea (Launched in 2018)
Visitors/Viewers	7,781,630	5,843,335	863,433	433,057	235,032
Gender (Male:Female)	71:29	68:32	80:20	90:10	65:35
Top Traffic Source	adamslove.org; Google	Google; WhatsApp; temanteman.org	temanteman.org; Google; blogspot.my	Google; nkut.edu.tw; travelgayasia	search.daum.net; Google
Impressions	29,522,104	18,936,223	2,850,004	1,100,339	400,500
Operating System	Android (71.7%) iOS (19.1%)	Android (90.3%) iOS (6.5%)	Android (71.6%) iOS (15.7%)	Android (52%) iOS (27.7%)	Android (59.5%) iOS (23.6%)
Top Keywords	HIV testing; acute HIV infection; PrEP and PEP	Herpes; Syphilis; HPV; HIV symptoms	STI; HIV symptoms	Syphilis; gonorrhea; HIV/AIDS; PEP; PrEP	Middle-aged Gay; Korean gay; HIV/AIDS
Peak Hours	8 - 10 PM	7 - 9 PM	5 - 7 PM	10 - 12 PM	8 - 10 PM

Table 1. Adam's Love regional datasets



Fig 2. Web analytics, video metrics and top keyword searches

We found an upward trend for search terms 'STIs - Syphilis, Herpes, Gonorrhoea, Warts, HPV' (825,471+ searches), 'HIV - early signs/symptoms characteristics' (700,010+ searches), 'HIV testing/procedure' (672,366+ searches) and 'HIV treatment access and medications' (489,563+ searches). There were interesting parallels between support needs and local policy and prevention infrastructure. For example, acute HIV infection, PrEP and PEP were emerging trends originating from Thailand and Taiwan and leveraged up reaching 198,552+ searches. Remarkable peaks were found on Sunday until Thursday, and peak hours for seeking support were evenings (18:00–24:00 hrs) with sharp falls during daytime (04:00–12:00 hrs).

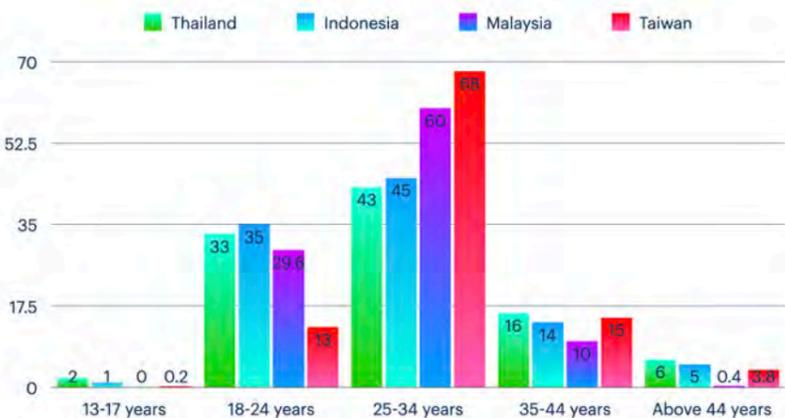


Table 2. Age range comparisons between Thailand, Indonesia, Malaysia, and Taiwan users

CONCLUSIONS

Our study shares evidence of high sexual health and HIV/STI support seeking in Asia. We propose intensive real-time interventions targeting risk group's search patterns to enable early online-to-offline transitions and successful HIV testing and treatment linkages.

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