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# National Security and Health: Communication in a Pandemic

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Abstract- Countries deal with more than national security to safeguard its citizens. Health problems are a crucial part of the general wellbeing of the people. As the global pandemic of 2020 showed, the population's health is an important consideration. About 32 years ago, HIV was just rearing its head and was making its way to be a pandemic, which it is today. This paper poses five research questions. How did the world governments deal with it then? How do they deal with it now? What resources have they used to combat and educate? What is the correlation between the campaigns and the incidence or reduction of HIV? What messages could other pandemic communication campaigns take from the successes and failures of HIV communication? The paper analyses the media campaigns and media messages in the 15 years between 1990 and 2005. The different cultural connotations of each chosen country would be used as a backdrop to better inform the analysis. The primary objective of the research is to determine the practical value of these advertisement and messages in combating the pandemic. This qualitative research uses a constructivist approach, and uses secondary data from statistics, research reports, and newspaper articles. The analysis will be done using theories such as stages of change model and theory of reasoned action/planned behaviour.

Keywords: HIV, Pandemic, Health Communication

#### Introduction

Across the globe, countries must ensure more than national security if it is to safeguard its citizens. The health system of a country is an integral cog in the national machinery and must be fully oiled and ready for any issue. The coronavirus pandemic and resultant lockdown showed us the importance of a well-planned and

maintained health system. The country must ensure that the healthcare system is prepared for any condition, whether local or global. Without a good system, any country will find that their population will suffer, which in turn, leads to economic downturn and losses. However, pandemics are not new.

About 32 years ago, HIV began to gain ground. It quickly escalated into a global pandemic, one that has continued to have a presence in the world, affecting many millions of people. While it has some similarities to COVID-19 in how it appeared suddenly and has a starting point that we do not know enough about, it is a steady pandemic that has lasted decades. In the last 30 years, countries have struggled and also made great strides in how they face HIV. Given its long history, we have had to find innovative ways to deal with it. This paper looks at the successes and failures of the global response to HIV.

## Statistics from around the world

The World Health Organization (2016) statistics point to over 36 million people infected and over 2 million new infections being reported. Sri Lanka has a <0.01% infection rate (less than 3000 persons reported to be infected although National STD/AIDS Control Programme estimates have placed it at about 6000) but many countries have large populations infected (HIV Media Guide, 2016; National STD/AIDS Control Programme, 2016; UNAIDS, 2016; UNAIDS, 2017; World Bank, 2017).

## Historical Response across the Globe

In the 1980s, countries equated HIV with AIDS in their media and health campaigns. They labelled it as a deathly disease, one that kills quickly and kills anyone who contracts it, without discrimination. Simon Reynolds of Australia



created a campaign that was based on this aspect of the disease. It was hugely successful because it caused mass terror of the disease (one side effect was that it created fear of the person with HIV too). The advertisement was known as the Grim Reaper and personifies death. The advertisement shows Death in a bowling alley where humans are the pins being bowled at. There are children and older people, all being knocked down by Death, which represents HIV. We can see fear on the faces of the humans and the atmosphere of the film is foggy. There are also more Reapers bowling adjacent to the first Death. It is clear that this is death's playing field. This advertisement was one of the first to come out for HIV and appears to have set the stage for many campaigns over the next few years. While it is not the first, it was one of the first few to show this topic with such an angle. Another was a public service announcement by the UK government, which is also discussed in this paper.

The result of these types of advertisements seems to be the fear of the person with HIV. People started to shun those living with HIV and were afraid of coming into contact with them. This is still true as many people with HIV report that they are still discriminated against and shunned by others because of the fear they have of HIV (Ranmuthugala, 2014). While these first-generation advertisements and campaigns were meant to help curb the spread by educating the people about the severity of the disease, what resulted was a fear of gay men and people with HIV.

The paper addresses five main questions.

- How did the world governments deal with the pandemic in the first two decades (which approaches did they use)?
- How do they deal with it now?
- What resources have they used to combat and educate?
- What is the correlation between the campaigns and the incidence or reduction of HIV?

• What messages could other pandemic communication campaigns take from the successes and failures of HIV communication?

The research draws on findings and arguments by various other researchers such as those by Hogg and Vaughan (2005), Eagly and Chaiken (1993), and Ajzen (1988) who talk about attitudes and beliefs, and Fatusi and Jimoh (2006) who examine behavioural change. The latter understand whether attempt to communication has a large-enough impact on behaviour, arguing that behaviour can be changed but that such impact is not as expected by governments or relevant parties. They argue that although people are given the information, they do not protect themselves (but in fact take risks). The paper is used since it talks about behaviour change, which is a central tenet of this paper. Other papers of the same calibre have also helped the direction of this paper. The paper also draws from Taggert et al (2015) who propose that social media and mobile technology (specifically cellular telephones) can be part of the global efforts at health communication. Finally, given that we live in the information era, it is also important to see if new modes of communication can be brought into showcasing the chosen messages. Thus, the paper pays special attention to social media such as social media such as email, Facebook, WhatsApp and Twitter, because these are now major tools in the arsenal of the change maker.

#### Methodology

This research paper identifies, analyses, and compares the media campaigns and media messages in the 15 years between 1990 and 2005. It will take into consideration the different cultural connotations of each chosen country so as to better inform the analysis. The paper will draw from the campaigns of 3 countries. These are the USA, the UK, and Australia. This selection is representative of a larger geographical area, addresses some cultural differences, draws from countries with the possibility of a large advertisement and health education budget, and



also shows some of the areas with a large population of HIV patients.

The three countries' campaigns are then compared against those from Sri Lanka, a country with a low prevalence of cases. Before doing so, the paper will analyse how the island's campaigns fared in the past 30 years and whether the country followed a similar trajectory to the other countries. The financial consideration does not take priority. The question is whether the small third-world nation has chartered another route or followed the same trajectory as the developed countries with a much smaller budget. Did it adapt some of the same theories or did it propose different ways of reaching its populace? Also, the paper looks into whether the country took cultural and societal realities into consideration when creating campaigns. The objective behind this disparate comparison is not to highlight any shortcomings in the developing country but to show that any nation, with small budgets for health communication, can use success stories, theories, and practices from developed countries (that may have already had to deal with the same issues) in order to create a campaign that works for them in their cultural realities.

The primary objective of the research is to determine the practical value of these advertisement and messages (by developed countries) in combating the pandemic. Such an approach is timely, because the recent pandemic has shown that small nations or developing nations have sometimes fared better in dealing with pandemics than those deemed developed.

This is a qualitative research that takes a constructivist approach to discuss the results, and it uses secondary data from statistics, research reports, and newspaper articles. The theories used include stages of change model and theory of reasoned action/planned behaviour.

#### **Objective**

The objective of the research is analysing multiple campaigns that leads to identifying a practical and tested method of advertising/communicating health messages.

This will help governments and concerned parties propose cost-effective but efficient and future-ready solutions that address the ground realities of their individual countries.

Media messages usually have overt and subliminal messaging to help nudge the audience in the direction the advertiser wishes them to take. Health campaigns sometimes take a similar approach. Governments, non-governmental interested parties, organisations, pharmaceutical companies have all created campaigns over the decades that have had such messaging so as to push people to behave in certain ways and take certain medicines. However, a government's policy towards eradicating or managing a disease through health campaigns goes somewhat beyond advertisement messaging to educating and changing behaviour.

To do so, they create campaigns that can impact people over many years. The people tend to internalise the messages they have received over the years because of the efficacy of the campaigns. This creates a community consciousness about the disease. This consciousness leads the paper to ask the following two questions: How do the general public view those living with HIV? How do the people living with HIV see themselves after the health campaigns? The answers to this will inform the direction of this paper because it looks at how change happens in people based on the campaigns by official parties. The paper will attempt to understand the message's efficacy so that it can be used in other applications.

#### **Results**

The campaigns run during the first era brought about a fear psychosis that negatively affected many HIV patients and led to deaths of patients due to isolation and attacks by communities. In addition, the lack of understanding surrounding the disease further damaged the mentality of the next generation and HIV is still considered a death sentence in certain communities based on the generational perceptions.



Campaign 1 - Grim Reaper, 1987

The Grim Reaper advertisements, which set the tone for many advertisements in the coming years, was fear-inducing. The campaign shows the grim reaper knocking on the door of HIV patients with a fear-driven campaign highlighting the fact that HIV (AIDS) causes death. The advertisement shows that the disease known as AIDS kills indiscriminately, and it was meant to make people fear the disease.

Campaign 2 – Public Information Film, United Kingdom, 1986

A campaign under the title of "Public Information Film" by the United Kingdom in 1986 shows a hand carving the word AIDS on a stone in a dark and smoky environment and once the word is carved, the stone tablet crashes to the ground. The dark atmosphere as well as the falling of the stone (which looks very much like a tombstone) belies the message, which only says that there is now a new disease. The fear is palpable in the imagery.

These two campaigns are from the beginning of the pandemic show a clear-cut focus on fear. However, another campaign from the USA in the 21st century takes a different approach.

Campaign 3 – USVI Department of Health World AIDS Day 2016 Commercial

This commercial shows a young man who has been accepted to a university and goes out to celebrate with his friends. A sexual encounter there leads him to contracting HIV. His face on receiving the news shows the worries he feels, but his mother shows love and understanding, and the message only implores people to get tested and to seek help.

This type of commercial became popular during the past decade and shows a significant change in trajectory in the global response.

Sri Lankan response

The three decades seem to follow a similar health trajectory as the other countries in terms of the emotions felt by the populace. In the late 80s and 90s, the focus was on fear, not only for HIV but for

other diseases such as leprosy. Many people with HIV faced discrimination and abuse. Princy Mangalika (founder of PWN+) had her house burned down and her children effectively refused entry to school because of her husband's (and later her) HIV status (Ranmuthugala, 2014). This is but one of many similar incidents in the country.

The 2000s brought with it a change of approach, one that utilized information to carry the message. Now, it is possible to see fact-based conversations in the advertisements campaigns, where those infected speak about their lives and the realities of living with HIV. This allows, as with campaign 3 above, to understand and sympathize with the person living with HIV. The trend continues, with many programs being done on the topic. They are regular and consistent. This seems to have allowed for a shift in perception, at least in parts of the population. However, there is still a lot of work to be done. There are still many people facing discrimination: many are thrown out of their houses if they are positive and many HIV-negative people appear to believe that HIV can be contracted through casual physical contact (Ranmuthugala, 2014). This aspect is yet to be corrected, which may show a gap in the Sri Lankan approach to health communication. The country may need a campaign that brings together images and information to provide an evocative advertisement that helps people understand the disease and sympathize with the HIV-positive people.

#### Discussion

It is noted that the primary driver of campaigns during these decades was fear and it was targeted to equate HIV to a gruesome death full of suffering. It taught viewers to hate HIV patients and to regard them as potential invaders attacking their families through a disease that could potentially be spread just by smiling or touching another person. This type of campaigning caused global hysteria and damaged the mindset of viewers permanently. It is still seen in general conversations that come up even



amongst the educated where their attitude can be gauged based on the information provided by their parents or other authorities. Schools have no clear guidelines on how to interact with those children who have HIV and they have a lower quality of life. This can be easily fixed through a focused approach that is led by a positive communications campaign spearheaded by the government. The following recommendations by the authors focus on such campaigns and make measurable/actionable suggestions on dealing with HIV and the related negativity.

These recommendations are made by the authors to create a more positive culture around HIV while managing the current health concerns posed by covid-19.

#### Positive communication strategy

A clear-cut communications strategy highlighting the ways in which HIV is passed and the methods in which communities can support those with HIV can be introduced. The said campaigns would isolate target audiences based on languages, tones, and communication strategies to ensure that the message is well received. Sample testing by advertising agencies in coordination with relevant authorities is also recommended to ensure that the campaigns are well thought through and are high impact. This ensures that the perceptions held will be changed over time through education and measurable community responses.

## Increase penalties/legal action

A strategy driven by the justice ministry and the local authorities is crucial to take action against those who attack or violate the rights of those living with HIV. The reason being that the current laws leave many gaps and loopholes for atrocities to be committed ranging from reported incidents such as burning of houses, attacking of HIV patients and public humiliation. By bringing in a punishable offense-based regulation, this can be stopped. Many patients have to move out of their villages and the emotional trauma caused by such incidents further blocks their chance of a normal life. This is both unfair and creates a hate/fear-

based culture that can pass on from generation to generation. It also increases the possibility of violence against other communities due to the lack of a strong response by local authorities against perpetrators of such crimes.

## **Actionable Policy Frameworks**

Local authorities need to work with other agencies (both international and local) to track the current trends in HIV, identify and manage potential risks of transmission, and propose a framework to assist severe cases where funding and peace of mind is not available. Therapy is also a key aspect that is lacking in the local context where HIV victims are provided medical assistance but are not given the emotional support required to reintegrate themselves into society. The diagnosis of HIV creates anger and a very negative mental position for patients where research has indicated that their anger towards society at large for the isolation and responses shown creates a knock-on effect. Some turn violent and some target the gender that gave them the disease in general leading to more cases and more unreported incidents. This creates a culture of transmission through revenge - rather than a supportive and healing one - threatening both the safety of Sri Lankan citizens as well as the victims through the responses by local communities. It further increases the negative perception of HIV patients by the general population.

#### **Conclusion**

While HIV has become a manageable disease in recent times (it is now identified as a chronic disease much like diabetes), the response mechanism adopted by the general public still mirrors the older fear-driven campaigns run by many countries. The rights and respect for people living with HIV have always come under question due to the attitudes and traditional views of the general populous. Even in Sri Lanka, it is noted that outstation communities attack those detected with HIV and the families are shunned and shamed for having been associated with such persons. Traditional views and the closed culture



followed at times in the local context create a very difficult environment for those living with HIV.

Due to the current covid-19 outbreak, the situation has become worse where certain reports have arisen of HIV patients being focused upon by those in the village as potential high-risk carriers of corona due to their compromised immune systems. The basic understanding that the disease is kept in check by medication is not accepted and fear drives further isolation of HIV patients. Even in the major cities, the same aspect of fear is present where families ensure that children of patients with HIV do not spend time with their children (especially at school, as happened a few years ago in two different cases). One of these case studies in Sri Lanka is that of the child being taken away from his mother and a prominent government official mentioning that HIV could be passed on from the mother to the child as they sleep on the same bed is another clear example of why correct communication is extremely important. Given that he was, at that time, the minister of education makes the matter that much worse. His comment was much publicized, and the wide audience set the HIV response back by a few years.

## References

African Medical and Research Foundation (AMREF), HIV and AIDS Behaviour Change Communication. (2011). [ebook] Kenya: The African Medical and Research Foundation, pp.1-15. Available at: https://www.google.lk/url?sa=t&rct=j&q=&esrc=s&source=web&cd=1&cad=rja&uact=8&ved=0 ahUKEwi5uMeem-

HXAhULPI8KHRqQBGcQFggmMAA&url=http%3 A%2F%2Famref.org%2Fdownload%2F5213444 c1cc56%2F&usg=A0vVaw0W7KzGEpsUEpNvvm JIuvXz [Accessed 23 May 2017].

Ajzen, I. (1988). Attitudes, personality, and behaviour. Chicago, IL: Dorsey Press.

Amfar.org: The Foundation for AIDS Research - HIV / AIDS Research. (2017). Thirty Years of

HIV/AIDS: Snapshots of an Epidemic. [online] Available at: http://www.amfar.org/thirty-years-of-hiv/aids-snapshots-of-an-epidemic/ [Accessed 11 May 2020].

AVERT. (2015). Global HIV and AIDS statistics. [online] Available at: https://www.avert.org/global-hiv-and-aids-statistics [Accessed 28 May. 2020].

AVERT. (2017). Homepage. [online] Available at: http://www.avert.org [Accessed 28 May. 2020].

BARNES, J. (1999). THE IMPACT OF SOCIAL MARKETING ON HIV/AIDS. [ONLINE] AIDS ANALYSIS AFRICA (VOL 10.2). AVAILABLE AT: HTTPS://WWW.NCBI.NLM.NIH.GOV/PUBMED/123465 39 [ACCESSED 16 JULY. 2020].

Bourne, A. (2011). Making It Count Briefing Sheet 6. [online] Makingitcount.org.uk. Available at: http://makingitcount.org.uk/files/MiC-briefing-6-SocialMarketing.pdf [Accessed 16 July. 2020].

Cdc.gov. (2001). HIV and AIDS --- United States, 1981--2000. [online] Available at: https://www.cdc.gov/mmwr/preview/mmwrht ml/mm5021a2.htm [Accessed 14 Jun. 2020].

Cdc.gov. (2017). HIV in the United States | Statistics Overview | Statistics Center | HIV/AIDS| CDC. [online] Available at: https://www.cdc.gov/hiv/statistics/overview/a taglance.html [Accessed 28 May. 2020].

Churcher, S. (2013). Stigma related to HIV and AIDS as a barrier to accessing health care in Thailand: a review of recent literature. [online] Searo.who.int. Available at: http://www.searo.who.int/publications/journal s/seajph/seajphv2n1\_p12.pdf [Accessed 22 Jul. 2020].



Cranston, P. et al. (no date) 'FutureConnect: Today, Tomorrow and Beyond'.

Daily Mail. (2016). Man who made controversial Grim Reaper commercial speaks out. [online] Available at: http://www.dailymail.co.uk/news/article-3494517/Siimon-Reynolds-1987-Grim-Reaper-commercial-lifts-lid-controversial-ad.html [Accessed 28 Jul. 2020].

Davis, J. (2006) 'Evolution of an Epidemic: 25 Years of HIV/AIDS Media Campaigns in the U.S.', Media, (June), p. 34. Available at: https://kaiserfamilyfoundation.files.wordpress.c om/2013/01/7515.pdf.

Dejong, W., Schneider, Shari K., Towvim, Laura G., Murphy, Melissa J., Doerr, Emily E., Simonsen, Neal R., Mason, Karen E., Scribner, Richard A., (2006). A Multisite Randomized Trial of Social Norms Marketing Campaigns to Reduce College Student Drinking. Journal of Studies on Alcohol. Vol 67(6), [online] Available at: http://www.jsad.com/doi/abs/10.15288/jsa.20 06.67.868 [Accessed 26 Jun. 2020].

Devos-Comby, L. and Salovey, P. (2002) 'Applying persuasion strategies to alter HIV-relevant thoughts and behavior.', Review of General Psychology, 6(3), pp. 287–304. doi: 10.1037/1089-2680.6.3.287.

de Tolly, K., Alexander, H. and Town, C. (2009) 'Innovative use of cellphone technology for HIV / AIDS behaviour change communications: 3 pilot projects Cellphones4HIV project SMS ARV reminders: TAC adherence clubs', Cell, (May 2008), pp. 1–13. Available at: http://www.mobileactive.org/research/innovative-use-cell-phone-technology-hiv-aids-

behaviour-change-communications-3-pilot-proje.

Eagly, A. H., & Chaiken, S. (1993). Process theories of attitude formation and change: The elaboration likelihood and heuristic-systematic models. In A. H. Eagly & S. Chaiken (Eds.), The psychology of attitudes (pp. 303–350). Orlando, FL: Harcourt Brace.

ECDC, (2014). Health communication and its role in the prevention and control of communicable diseases in Europe. [ebook] Stockholm: ECDC, pp.1-28. Available at: https://ecdc.europa.eu/sites/portal/files/media/en/publications/Publications/health-communication-communicable-disease-europe.pdf [Accessed 15 May 2020].

Faria, N., Rambaut, A., Suchard, M., Baele, G., Bedford, T., Ward, M., Tatem, A., Sousa, J., Arinaminpathy, N., Pépin, J., Posada, D., Peeters, M., Pybus, O. and Lemey, P. (2014). The early spread and epidemic ignition of HIV-1 in human populations. [online] NCBI. Available at: https://www.ncbi.nlm.nih.gov/pmc/articles/PM C4254776/ [Accessed 17 June. 2020].

Fatusi, A.O. and Jimoh, A., (2006). The roles of behavior change communication and mass media. AIDS in Nigeria: A Nation on the Threshold. Cambridge: Harvard Center for Population and Development Studies, pp.323-48.

Feyissa, G., Abebe, L., Girma, E. and Woldie, M. (2012). Stigma and discrimination against people living with HIV by healthcare providers, Southwest Ethiopia. [online] NCBI - PubMed.gov. Available at: https://www.ncbi.nlm.nih.gov/pubmed/227942 01 [Accessed 15 Jul. 2020].



French, R. S. et al. (2014) 'An exploratory review of HIV prevention mass media campaigns targeting men who have sex with men', BMC Public Health, 14(1), p. 616. doi: 10.1186/1471-2458-14-616.

Gallopel-Morvan, K., (2008). Social Marketing: Main Principles, Tools & Theoretical Models [Online] Available at: http://ec.europa.eu/health/archive/ph\_determinants/life\_style/alcohol/forum/docs/ev\_20081 112\_co01\_en.pdf

Health Policy Project. (n.d.). Stigma and Discrimination. [online] Available at: https://www.healthpolicyproject.com/index.cf m?id=topics-Stigma [Accessed 28 Jul. 2020].

HIV media guide. (2016). HIV statistics in Australia - HIV Media Guide. [online] Available at: http://www.hivmediaguide.org.au/hiv-in-australia/hiv-statistics-australia/index.html [Accessed 28 Jun. 2020].

Hogg, M. A., & Vaughan, G. M. (2005). Social psychology (4th ed.). London, England: Prentice-Hall

HRSA (n.d.). A Living History. [ebook], pp.1-16. Available at: https://hab.hrsa.gov/livinghistory/issues/Gay-Men.pdf [Accessed 25 May 2020].

Jung, M., Arya, M. and Viswanath, K. (2013) 'Effect of Media Use on HIV/AIDS-Related Knowledge and Condom Use in Sub-Saharan Africa: A Cross-Sectional Study', PLoS ONE, 8(7). doi: 10.1371/journal.pone.0068359.

Keim, B. (2014). Early Spread of AIDS Traced to Congo's Expanding Transportation Network. [online] News.nationalgeographic.com. Available

at:

https://news.nationalgeographic.com/news/20 14/10/141002-hiv-virus-spread-africa-health/ [Accessed 02 Aug. 2020].

Kincaid, D.L., Parker, W., Schierhout, G., Connolly, C., & Pham, V.H.T. (2006). AIDS Communication Programmes, HIV Prevention, and Living with HIV and AIDS in South Africa. Pretoria: JHHESA.

Lagarde, F. (2003). Review of Canadian HIV/AIDS Campaigns Carried Out Between 2000 and 2002. [online] Canada: Health Canada, pp.1-12. Available at: http://www.pubs.cpha.ca/PDF/P16/21501.pdf [Accessed 28 May. 2020].

Lee, N. R. and Kotler, P., (2011) Social Marketing: Influencing Behaviors for Good, (4th ed.). SAGE [Online] Available at: http://www.socialmarketingservice.com/site/assets/files/1010/socmkt\_primer.pdf

Lettenmaier, C. et al. (2014) 'HIV Communication Capacity Strengthening: A Critical Review', J Acquir Immune Defic Syndr, 66, pp. 300–305. doi: 10.1097/QAI.0000000000000238.

Lewis, M. and Neighbors, C. (2010). Social Norms Approaches Using Descriptive Drinking Norms Education: A Review of the Research on Personalized Normative Feedback. [online] Taylor & Francis. Available at: http://www.tandfonline.com/doi/abs/10.3200/ JACH.54.4.213-218 [Accessed 26 Jun. 2020].

McGuire, W. J. (1985). Attitudes and attitude change. In G. Lindzey & E. Aronson (Eds.), The handbook of social psychology (Vol. 2, pp. 238 – 241). New York, NY: Random House.



Miller, D. (2016) 'The social media landscape Book', Social Media in an English Village, pp. 19–44.

Myhre, S. L. and Flora, J. A. (2000). HIV/AIDS communication campaigns: progress and prospects. [online] PubMed - NCBI. Available at: https://www.ncbi.nlm.nih.gov/pubmed/110103 55 [Accessed 18 Jul. 2017].

National STD/AIDS Control Programme, Department of Health Services, (2016). Available at

http://www.aidscontrol.gov.lk/web/images/pdf/quarterly\_reports/HIV%204th%20Q%202016N.pdf

National STD/AIDS Control Programme, Department of Health Services, (2017). [Online] Available at http://www.aidscontrol.gov.lk/index.php?lang= en

Nationmaster.com. (2014). Countries Compared by Media > Households with television. International Statistics at NationMaster.com. [online] Available at: http://www.nationmaster.com/country-info/stats/Media/Households-with-television [Accessed 9 Jul. 2020].

NationMaster. [Online] Available at: http://www.nationmaster.com/country-info/profiles/Sri-Lanka/Media

National Institute of Allergy and Infectious Diseases (2014).

Noar, S. M. et al. (2009) 'A 10-year systematic review of HIV/AIDS mass communication campaigns: Have we made progress?', Journal of health communication, 14(July 2015), pp. 15–42. doi: 10.1080/10810730802592239.

Odine, M., Effective Communication for HIV/AIDS in Africa. [Online] Available at communicationandhealth.ro/upload/number5/MAURICE-ODINE.pdf

Ranmuthugala, M. E. P. (2014) Economic and Social Reintegration of HIV Positive Women: A Case of HIV Positive Women at Positive Women's Network. University of Colombo.

Science Daily, (2015). [Online] Available at https://www.sciencedaily.com/releases/2015/01/150106103951.htm

Seloilwe, et al. (2015) 'Parent and Youth Communication Patterns on HIV and AIDS, STIs and Sexual Matters: Opportunities and Challenges', Adolescent Behaviour, 3(3). doi: 10.4172/2375-4494.1000203.

Sri Lanka Watch. (2017). Let's Talk About Sex in Sri Lanka. [online] Available at: http://srilankawatch.com/index.php?option=com\_content&task=view&id=856 [Accessed 18 Jul. 2020].

Svenkerud, Peer J., and Singhal, A., (1998)
"Enhancing the effectiveness of HIV/AIDS
prevention programs targeted to unique
population groups in Thailand: Lessons learned
from applying concepts of diffusion of innovation
and social marketing." Journal of Health
Communication (Vol 3.3.) 193-216. [Online]
Available at:
http://www.tandfonline.com/doi/abs/10.1080/
108107398127337

Taggart, T. et al. (2015) 'Social media and HIV: A systematic review of uses of social media in HIV communication', Journal of Medical Internet Research, 17(11). doi: 10.2196/jmir.4387.



UNAIDS (1999). Communications programming for HIV/AIDS: An annotated bibliography. [ebook] Geneva: UNAIDS, pp.1-112. Available at: http://data.unaids.org/publications/irc-pub01/jc117-commprogr\_en.pdf [Accessed 22 Jul. 2020].

UNAIDS. (2017). Fact sheet - Latest statistics on the status of the AIDS epidemic. [online] Available at: http://www.unaids.org/en/resources/fact-sheet [Accessed 28 Jun. 2020].

UNAIDS. (2016). Thailand. [online] Available at: http://www.unaids.org/en/regionscountries/countries/thailand [Accessed 28 Jun. 2020].

WHO. [Online] Available at: http://www.who.int/hiv/data/en/. [Accessed 25 June 2020].

Wilder, T. (2012). A Timeline of Women Living With HIV: Past, Present and Future. [online] TheBody.com. Available at: http://www.thebody.com/content/16569/a-timeline-of-women-living-with-hiv-past-present-a.html [Accessed 20 Jun. 2020].

World Bank. (2017). Prevalence of HIV, total (% of population ages 15-49) | Data. [online] Available at: https://data.worldbank.org/indicator/SH.DYN.A IDS.ZS [Accessed 28 May, 2020].

YouTube. (2017). Grim Reaper [1987]. [online] Available at:

https://www.youtube.com/watch?v=U219eUIZ 7Qo [Accessed 28 May. 2020].

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