

Sex Like Sweet Potatoes: Framing HIV in the South Pacific Media

Farzana Gounder¹, Rukmani Gounder², Marilyn Cornelius³

¹Department of Linguistics, Waikato University, New Zealand

²School of Economics and Finance, Massey University, New Zealand

³Freelance Health and Environmental Specialist, USA

Correspondence to: Farzana Gounder, Linguistics Program, Faculty of Arts and Social Sciences, University of Waikato, New Zealand. Email: fgounder@waikato.ac.nz

ARTICLE INFO

Article history:

Received: 18 Oct 2015
Accepted: 29 Jan 2016
Published: 4 Mar 2016

Keywords:

- Media
- HIV infection
- Combination prevention framework
- Health literacy
- Frame analysis
- Health behaviour
- Fiji
- South Pacific

ABSTRACT

Background: UNAID's recommended approach to increasing knowledge and effecting attitudinal changes towards HIV infections is to implement a Combination Prevention framework, bringing together intervention strategies from the medical, structural and behavioral frames, tailored to the localized environment. This study discusses the likely impact of the above-mentioned frames on media's circulation of HIV-related information and the long-term advancement of societal knowledge on HIV infection within the South Pacific context.

Methods: We used content analysis to examine the usage of the three frames for HIV infection reporting in *The Fiji Times* from January 2007 to December 2014.

Results: We found 154 articles dealing with HIV infection. The frames were not equally represented. Structural frame dominated the media (73%), followed by behavioral (16%) and medical (10%) frames. The structural frame presented HIV infection as a social issue and media emphasis was on a disease that needed to be accommodated within the society. The behavioral frame defined HIV infection as a sexually transmitted disease of the individual and emphasized prevention. The medical frame focused on individual diagnosis and treatment.

Conclusions: Given the central role of media in health literacy in Fiji, there is a need for more media emphasis on behavioral and medical approaches to HIV prevention and management. The media also needs to actively report on the HIV issues to raise public awareness and discuss cultural concerns.

Citation: Gounder F, Gounder R, Cornelius M. Sex Like Sweet Potatoes: Framing HIV in the South Pacific Media. *J Public Health Dev Ctries*. 2016; 2(1): 109-120.



INTRODUCTION

Prior to 2007, which marks the beginning of the timeframe of this study, human immunodeficiency virus (HIV) infection was not perceived as a major health focus in Fiji [1]. However, the rapid increase in diagnosed HIV cases from 2000-2013 has led to a dramatic shift in journalistic attitudes towards HIV infection as being newsworthy over the past seven years. In 2012, 62 new cases were confirmed, with 64 new cases in 2013; and the total number of confirmed HIV cases in 2013 was 546, although the UNAIDS and the WHO estimate that the number may be closer to 1000, with the majority of cases developing due to heterosexual transmission [2]. In a country with a population of less than a million, the perceived threat of HIV has become an area of grave concern and HIV infection is portrayed as a 'high profile' disease in the media [3]. In addition to the increase in HIV infection, there is society's conflicting knowledge about the effects of the virus on the human body, and beliefs about its transmission and prevention [2]. Hence, while HIV infection's media coverage has increased, we also need to consider the type of information that is provided to the general public.

In recognition of the complexity of HIV infection as a medical and social disease, preventive efforts have moved from the individual as the primary target of medical intervention and behavioral change, to also acknowledging the individual's societal environment as a crucial intervention tool. The recommended approach to increasing knowledge and effecting attitudinal changes towards HIV infection, therefore, is to use a Combination Prevention framework, bringing together intervention strategies from the medical, structural and behavioral frames, tailored to the localized environment [4]. Programs that leverage a Combination Prevention framework tend to:

- have a focus on rights, evidence, and customization to community and individual needs,
- integrate biomedical, behavioral, and structural approaches into interventions aimed at persistent reduction of new infections,

- combine program and policy actions to address current risks and long-term vulnerability,
- operate in ways that create synergy between the individual, community, and society for a sustained period of time, and
- forge partnerships between community, private sector, government, and international bodies to leverage and emphasize continuous learning.

Media Frames

As with any health issue, HIV infection can be represented from different perspectives, and the dominant perspectives, or 'semiotic frames' influence how we do (and do not) think about HIV [5]. Framing is 'a selection process' that "defines problems", "diagnoses causes", "makes moral judgments" and "suggests remedies" [6]. While acknowledging the multiple readings associated with any news item in relation to the socio-historical, socio-cultural and socio-economic perceptions and experiences of individuals, research has demonstrated media's crucial role in promoting a particular stance on disease causes, treatments and preventions, as well as shaping public attitudes towards individuals with HIV infection and the awareness of HIV infection as a disease [7]. Hence, close examination of media's health framing provides an important means of engaging with societal views on health [8] and such studies have implications for health education, policy developments and health governance laws.

Medical, Structural and Behavioral Frames

Analysis of the medical, structural and behavioral frames has provided information on HIV infection coverage in mainstream media [9-11] targeted at specific ethnic [12] and indigenous communities [13]. Each of these frames has implications for behavioral practices around health at the individual, institutional and societal levels.

Medical

Medicalization is commonly understood as the medical discourse's dominance over other discourses on health-related beliefs and practices from the individual to the wider societal

and institutional levels [14-17]. Under medicalization, the emphasis is on medical intervention rather than prevention. The far-reaching implications of the medicalized viewpoint is reflected in HIV research through (a) the policy implications of medical advances in treatment and containment of the spread of HIV [18], (b) the concept of a healthy body in medical terms and in the subjective notion of a 'lived experience' [19], (c) the pervasion of medicalized world views on health in the news media [21], and (d) media's role in promoting medicalization [21].

Structural

The structural frame is a broad category that encompasses the relationship of social structures, such as class, caste, gender and ethnicity within macro-level social, economic and political developments that govern individuals' health and wellbeing status, and determine their access to biomedical and ethno-medical healthcare [22]. The structural perspective is a reaction to the medical model's lack of consideration of these socio-structural contexts of illness and healing. Studies under the structural frame can be locally-situated and focus on the dynamics within a country's geopolitical structures and how they impact local people, as in (a) the analysis of economic disempowerment and increased possibilities of sexually risky behavior [22], the effectiveness of (b) media HIV programs [23], and (c) religious organizations [24] in combating HIV-related stigma. On the other hand, studies may be macro-analytical and examine the impacts of global interactions on a country's access to healthcare [25].

Behavioral

The behavioral approach's overall aim is to predict individuals' likelihood of undertaking adaptive health practices around an illness. Studies analyze individuals' beliefs about the perceived likelihood of suffering from an illness, the perceived severity of the illness, the desire to avoid or overcome the illness, the confidence that undertaking a recommended course of action will reduce their likelihood of suffering from the illness, and the belief in one's ability to carry out the recommended course of action [26]. HIV-related research under the behavioral

frame examines knowledge, attitudes and practices in relation to HIV prevention and treatment. Studies have found (a) correlations between false knowledge and beliefs about prevention and treatment with the increased chances of risky behavior [27,28], (b) local media as a primary source for promoting false knowledge and beliefs about prevention and treatment [29], (c) the media's impact on beliefs and knowledge about HIV transmission [30,31], and (d) positive correlation between media access and exposure with increased HIV infection awareness and knowledge about protective sexual practices and treatment [32-35]. Under the behavioral frame, being ill or well is the responsibility of the individual, with illness being the consequence of poor lifestyle choices. The individual is, therefore, seen as able to make changes to their habits and to have control over their ability to prevent illness. The inability to make constructive behavioral and attitudinal changes to enhance their health is seen as a flaw in the individual's character [9].

Summary

Each frame places a different emphasis on causes, treatment and prevention of HIV infection. The dominance of any one of these frames has far-reaching consequences on (a) how an individual and a society respond to their own and others' health and wellbeing; (b) what one considers to be areas of concern regarding health matters; (c) the criteria for measuring oneself as healthy or unhealthy; (d) the allocation of funding; and (e) the laws and policies that are put into place to govern HIV-related behaviors.

Media Framing of HIV in the South Pacific

In the small island nations of the South Pacific, media is heavily utilized in HIV infection prevention campaigns. Studies have recently begun to address the region's framing of HIV-related news articles [4,5], and provide in-depth arguments on the need for increased coverage in Pacific media discussions of HIV in the structural frame. They call for news stories to situate HIV infection within the localized context of other existing societal concerns (including domestic violence, human, and gender rights)

and for HIV coverage to be representative of all sectors of the community. However, until the present study, research has not analysed to what extent the three frames within the Combination Prevention framework are utilized in South Pacific media news. This study discusses the likely impact of the above-mentioned frames on media's circulation of HIV-related information and the long-term advancement of societal knowledge on HIV infection within the South Pacific context.

MATERIALS AND METHODS

The study used content analysis to examine the usage of the three frames for HIV infection reporting in Fiji. *The Fiji Times* was chosen because it is the longest serving newspaper in the Pacific, is produced daily, and has the highest circulation figures of all the newspapers in the country. *The Fiji Times* also has a complete online record of news stories for the past seven years.

We used "HIV" and "AIDS" as the keywords on The Fiji Times website from January 2007 to December 2014. The researchers and an assistant independently read and classified the articles based on whether they fell predominantly under medical, structural, or behavioral definitions in their overall orientation. The two markers were: the main theme [37] and the individuals cited within the news story (such as individuals with HIV infection, lay people, medical professionals, law and policy makers, religious leaders, HIV activists and NGOs) [9]. As the articles were available in the public domain, ethical approval for the study was not required.

Using NVivo 10.0 software, the articles' heading, lead and content were examined for manifest and latent themes. The articles were then further categorized into thematic groupings to provide in-depth information on themes focussed upon within each frame. The researchers and assistant worked independently to identify themes, then cross-checked their categorizations for validity. An intercoder reliability test achieved over 80% for pair-work concordance. Where there was ambiguity, a

mutual decision was reached through discussion.

RESULTS

We found 154 news stories dealing with HIV infection on *The Fiji Times* website. The corpus was divided according to whether the articles were framed under medical, structural or behavioral perspectives. Table 1 summarizes the relative proportions of articles framed under each perspective. As shown, the structural perspective was the most predominant at 73%. This was substantially higher than the behavioral perspective at 16%. The medical frame usage was only in 10% of the articles. The use of medical, structural and health behavioral frameworks for the period 2007 to 2014 is illustrated in Figure 1. As is highlighted, the structural frame was the most frequently used perspective and dominated the HIV infection news across the seven year period analysed in this study. Moreover, usage of the medical and behavioral frames remained low during this period. The behavioral perspective had only two articles in 2008 and 2013, and three articles each from 2010 to 2012. Articles in the medical frame were never more than two in most of the other years, except for 2011, where there were five articles.

Table 1. The Fiji Times Articles on HIV Infection under Various Frames (2007-2014)

Frames	Number	Proportion
Structural	113	73.4
Behavioral	25	16.2
Medical	16	10.4
Total	154	100

Structural Framing

The majority of the articles (77%) discussed the socio-structural impacts of HIV. The articles were placed under six themes. The most dominant theme was "*societal efforts in increasing public*

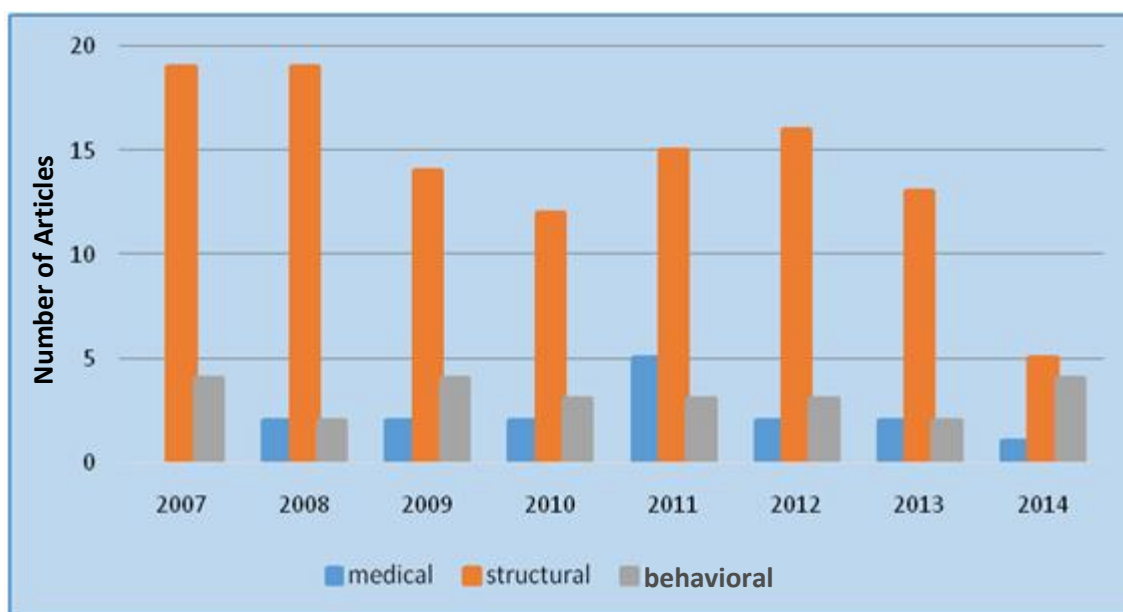


Figure 1. Media Usage of the Medical, Structural and Behavioral Frames by Year (2007-2014)

knowledge about HIV." The articles predominantly focussed on activities such as the President's secondary school visits ('President's visit inspires, empowers the young', March 13, 2013), sports personalities raising awareness at public events ('Players to promote HIV message', January 12, 2011), NGOs and government ministries running village workshops ('Dulaki says it's not end of the road', June 2, 2013), and religious organizations' response to increasing HIV awareness and empathy for those infected with HIV ('HIV, AIDS and the church's response', February 23, 2011). The awareness-raising articles could be divided further: one category focussed on raising knowledge about HIV as a prevalent disease in society, as exemplified in 'President's visit inspires, empowers the young' (March 13, 2013). The other focused on raising awareness to stop discrimination both towards those infected ('Need to stop the stigma', March 1, 2014), and those affected by HIV, as seen in 'Cutting out discrimination' (February 3, 2014), which addressed the stigma that children of HIV infected parents faced in the schools.

The second theme was the *rapid increase of HIV infections* in Fiji. Most articles provided statistical figures to support claims that HIV infection was increasing in Fiji ('236 HIV cases confirmed', February 1, 2007). Other articles categorised the general population and

correlated groups with HIV infection risk and prevalence ('AIDS figures rise', May 16, 2012). Some discussed future scenarios by looking at the population trends ('Research unit to study HIV/AIDS in the Pacific', October 4, 2011). The third theme was the *economic repercussions of HIV infections* on the wider society. Articles expanded upon the government's expenditure on decreasing HIV infection ('Increase in sex disease', November 9, 2008) and the impact of HIV on the business sector and the country's workforce ('Business council concerned at HIV/AIDS in workforce', October 9, 2008). The fourth theme addressed *issues of human rights* in relation to HIV infections. Articles presented HIV in relation to wider socio-cultural contexts of women's rights, power distribution in relationships and domestic violence ('Women fight killer disease', March 10, 2009; 'Social relations to curb HIV, AIDS', August 4, 2011).

The fifth theme emphasised *the government's implementation of policies and laws* to improve the lives of those with HIV infection ('HIV laws fight discrimination', June 13, 2011). Other articles discussed the rights and legality around confidentiality. 'HIV decree human rights based' (July 2, 2011) explained the 2011 HIV decree's focus on empowering HIV positive individuals. Under the decree, individuals had the right to non-discrimination in the workforce and in access to adequate medical

care, the required consent of individuals before a HIV test and confidentiality in HIV testing and confirmation. The final theme focussed on the *rights of different sectors* of the community. These included the rights of sex workers ('Legalise sex trade', November 28, 2012), prisoners ('Prisoners have right to health care', June 7, 2011), and people with HIV ('Laws fail to protect HIV patients, says advocate', August 3, 2011).

Behavioral Framing

As HIV infection is classified as both a communicable disease and a sexually transmitted infection, 13% of the articles emphasized sexual behaviors as the major cause of HIV infection. All such articles advocated for a change in attitude and behavior to curb the spread of HIV infection. The first theme addressed the *sexual transmission of HIV through personal 'coming out' narratives*. The protagonists mentioned they had caught the disease through unprotected sex with an unnamed partner, with whom they had been in a stable relationship for some time. In 'Colata breaks the silence' (August 31, 2007), and 'Joeli shows rare courage' (December 5, 2007), both men mentioned that they caught HIV infection from their girlfriends. While it was unclear whether the men's girlfriends had known about their HIV status, one female protagonist mentioned in 'Choice determines future: HIV carrier', that she caught the disease from her husband, who had kept his HIV status hidden from her:

"I come from a conservative family and there was no way I could have gotten infected. After I found the courage to tell my husband and my family about my condition, then only did my husband confess to being HIV positive," she said. "He told me he got the infection from his first wife." ('Choice determines future: HIV carrier', May 12, 2007)

The second theme cited society's *casual attitudes and risky sexual behaviors* as being the major cause of HIV transmission. Women's sexual behavior was targeted in the lead of two articles ('Behavior blamed', August 15, 2011; and 'Sex like sweet potatoes', August 10, 2011). 'Sex like sweet potatoes' (August 10, 2011)

placed emphasis on women's infidelity as the main cause of transmission through the quotation of a HIV positive female in its lead:

In this day and age, women "just go for it" when they want sex, said a 28-year old Fijian woman living with HIV. "When they want it, they just go," she said in a report commissioned by the Pacific Islands AIDS Foundation. "It becomes easier for them to get the virus because they never use condoms and they do not know about HIV." ('Sex like sweet potatoes', August 10, 2011)

However, the article went on to report that the Pacific Islands AIDS Foundation's study found the sexual promiscuity of both genders to be the major cause of HIV transmission:

The report released in Nadi last month by Minister for Women Doctor Jiko Luveni said women and men were "going for sex" because it was like sweet potatoes. ('Sex like sweet potatoes', August 10, 2011)

Other articles attributed blame equally to all ages:

"The pull to indulge in risky sexual behavior in today's modern society is stronger than before. The pressure to conform to a sexual merry-go-round system with its demands and tempting pleasures is intense. The young, the middle-aged, the elderly, are all enticed." ('Dare to do right', December 1, 2013)

The final theme focused on HIV campaigners' call for *using protection in sexual encounters*. While the call for abstinence was the predominant message, 'Think before sex' (September 26, 2012), and 'Protection is the key' (November 28, 2012), highlighted the message of the President of Fiji, an instrumental HIV advocate, in acknowledging that abstinence cannot be taught as the only protective measure and called for the increased use of condoms:

"People ask me and want me to say abstinence as a preventative measure. But I say, you are full-blooded young adults and you spend eight hours of a day together. There are those who can abstain and there are those who can't. For those who can't, I say use protection. We know what works

and what doesn't." ('Think before sex', September 26, 2012)

With sex considered a taboo topic in Fiji, the cultural constraints around speaking about HIV publicly were acknowledged in both 'Protection is the key' and 'Behind the good fight' (June 7, 2009). Language constraints, where sex-related words are considered profane, were also acknowledged in negotiating adequate and respectful discussions on the sexual transmission of HIV and the use of protective measures:

"There were times when one word in the English language could take a whole sentence in the Rotuman language to explain that one word. There were other times when the Rotuman vernacular is a limitation for many times it sounds as if I am swearing at my audience." ('Behind the good fight', June 7, 2009)

Medical Framing

News categorized under the medical frame (10%) focussed on HIV infection as a pathological disease. The main focus was on *blood testing*. A Christian Minister advocated for his congregation of 1014 people to get tested as this was the only way to be certain whether one had contracted the AIDS virus ('Minister issues HIV challenge', May 19, 2009), and infrequent blood testing was blamed as the primary reason AIDS was rapidly increasing in Fiji ('Low HIV test rates', November 28, 2013).

Another focus was to inform the public about the *disease classification* of AIDS in Fiji. In 'Notifiable disease list reviewed' (March 27, 2008), the focus was on the incorporation of AIDS into the list of notifiable communicable diseases. An explanation was given of what a notifiable disease was ("diseases or disease entities that were required by law under the Public Health Act to be reported to health authorities by medical practitioners"), however, no definition was given of the communicable diseases. Under the topic of *treatment*, news stories were centred on medical advances, expertise, monitoring and the increase in society's medicalization practices. A 2011 article ('Danger that is HIV', October 15, 2011) heralded a recent medical advancement, the

development of a pill to be taken daily to prevent HIV infection. Another article ('Coconut oil cure-fact or fiction', March 21, 2010) discussed the chemical composition of coconut oil and the potential of coconut oil to prevent or treat HIV infection. While the topic was of interest to the general public, there was a high usage of scientific jargon, which made the subject matter difficult to understand:

Dr Mary Enig, a biochemist and probably the world's leading expert on coconut oil, writes "Monolaurin inhibits the growth of many pathogenic microorganisms. One of the ways it does this is by disrupting the lipid membranes of viruses, and Enig lists HIV, herpes and influenza as examples of viruses that have been shown to be destroyed by monolaurin." ('Coconut oil cure-fact or fiction', March 21, 2010)

Other articles promoted the *medical expertise of practitioners* in diagnosing and treating AIDS. 'Nurses learn all about HIV-AIDS' (January 11, 2008) discussed the Fiji Nursing School's initiative to include HIV knowledge into its curriculum. This meant that district nurses, particularly those in outlying, rural communities, would be trained to recognize HIV infection symptoms. Other articles pertained to medical monitoring of HIV patients. 'HIV alert' (October 14, 2011) was about the monitoring of babies born to HIV positive mothers. The public was informed about the women's close monitoring and treatment from the initial stages when the women tested positive for HIV in the ante-natal clinics, into their pregnancy and post-partum stages. The babies were also closely monitored and were found to be HIV negative.

The medicalization model was upheld against alternative methods of treatment in a 2012 article. While the content of the article presented the perspectives of both the doctors and the herbalist, the title and lead, which are reproduced below, imply that the patient died due to ingesting herbal medicines:

HIV patient dies after herbal treatment: A person living with HIV/AIDS who was on antiretroviral (ARV) treatment in Suva and was later treated with herbal medicine at Lutunavonu, Nailega in Tailevu has died.

(‘HIV patient dies after herbal treatment’, March 5, 2012)

A final focus under the medicalization perspective was in the domain of *medicine versus religion*. The contention was exemplified in ‘Respondents believe in faith, prayer cure’ (December 15, 2011). In its lead, the article cited findings of the study “Me, my intimate partner and HIV” [36], where the individuals from a cross-section of Fiji society expressed the viewpoint that faith healers could cure HIV infection:

“A number of people-including health workers - who were quizzed in a survey on the transmission of HIV and AIDS say they believed HIV infection could be cured by faith and prayer.” (‘Respondents believe in faith, prayer cure’, December 15, 2011)

Findings for Each Framework

Table 2 summarizes the predominant themes under each frame. The structural frame presented HIV infection as a social issue and media emphasis was on ‘a disease that needs to be accommodated within society’. Related discussions were on the rights of people, laws and policies implemented to improve the lives of those with HIV infection, educating the public about HIV infection prevention and to combat stigma, and the financial cost of HIV on society. The behavioral frame defined HIV infection as a sexually transmitted disease of the individual and emphasized prevention. The medical frame also targeted the individual but talked about HIV infection as a pathological disease that affected the human body and deviated it from the biological norm; the focus was on diagnosis and treatment.

DISCUSSION

The study focuses on the utilization of the medical, structural and behavioral frames, identified as the key components of the HIV Combination Prevention framework [4] in the newspaper articles about HIV in Fiji. Findings indicate that there is substantial disparity in the implementation of the three frames in Fiji media. The structural frame dominates HIV news & the

Table 2. Summary of Major Themes Under Structural, Behavioral and Medical Frames

Frames	Themes
Structural	<ul style="list-style-type: none"> • Societal efforts in increasing HIV public knowledge • HIV’s rapid increase in prevalence • HIV’s economic repercussions • Human rights
Behavioral	<ul style="list-style-type: none"> • Personal narratives’ emphasis on sexual transmission of HIV • Society’s casual attitudes and risky sexual behaviors • Practicing precaution in sexual encounters
Medical	<ul style="list-style-type: none"> • Blood testing • Treatment • Medicalization versus alternative methods • Medicine versus religion

occurrence of the behavioral and medical frames is significantly lower. The findings also show that the three health frames differ in emphasis from each other in the presentation of HIV-related information. The increased portrayal of HIV within the context of other societal issues and the positive representation of individuals with HIV infection is commendable and concomitant with recommendations on HIV news coverage in general [7] and in particular for the Pacific region [2]. The high usage of the structural frame suggests that media is presenting HIV infection as an issue of local concern, using local people and events. Such a strategy helps to hold the public’s interest [38] and the localized discourse around HIV infection allows the public to better understand and relate to the issues of HIV infection [39]. Local journalists are also playing to their strengths in discussing HIV within the localized context and in relation to wider societal concerns, such as poverty, rights of workers, and domestic violence). What needs to be continually questioned and addressed is whether all sectors of the community, including the minority groups, are being represented in the news, how and to what degree [40,41], as civic

journalism can have a significant influence in policing health inequalities [40,42].

However, the increased societal focus appears to be at the expense of both promoting long-term prevention strategies (under the behavioral frame), and emphasis on effects of the disease and effective diagnosis and treatment (under the medical frame). Given the essential role that media plays in the dissemination of health-related information, these findings correlate with research showing that people in Fiji have little awareness about the transmission and effects of HIV infection on the body [36]. The lack of information is an area of concern, because as seen elsewhere, when adequate medical and behavioral information is absent, other information arises to fill the vacuum, contributing to false knowledge [20], which results in the perpetuation of myths on spread of the virus [43,44]. This information, in turn, incites fear and hostility towards those known or thought to have HIV infection [45,46]. Hence, it is important to increase knowledge within the medical and behavioral frames and to work synergistically with the structural frame to decrease the incidence of, and stigma surrounding HIV infection in the country.

With increasing individual and societal concerns, we would imagine that there would be better coverage in 2014 compared to 2007, but this was not reflected in our analysis, despite the fact that reported infections were increasing. It is to be noted that this study's timeframe coincided with a period of political instability in Fiji. The military coup in 2006 led to eight years of military rule where the press coverage was monitored. The media coverage during this period shifted to domestic political issues that took priority and health coverage was minimal. There was very little information on both social and health coverage as the respective institutions did not report on those issues. This could explain the general downward trend in reporting for all the three frames over the years.

Future research could study the behavioral and medical interventions for HIV infection in Fiji and the South Pacific to ascertain the key themes, success stories, and the lessons learned. Deeper, ethnographic studies could look at the implications of the structural frame on infected individuals and how they would like to

be treated medically and socially, which could then be the basis for recommending innovative programs that fit the behavioral frame. Policy makers should call for fairer reporting based on evidence and science, and lobby for more behavioral and medical programs. Individuals should also continue to speak out and demand more positive programs. Information and data could be shared to address the concerns and awareness of these issues.

A key issue in many Pacific island nations and other developing countries is of non-reporting by the media on HIV. The traditional and cultural barriers, therefore, are major constraints preventing HIV issues being made public through the media. It is also a problem at the community level where individuals would not identify HIV for cultural reasons. Hence, other developing nations could also analyse the HIV situation locally through similar studies. Comparisons of such studies would provide a basis of exploration as to which findings could be applied across cultures, and which are culture-specific thereby informing the development of the Combination Prevention framework in localized settings. The implications of addressing these concerns include developing cultural strategies to improve knowledge of health risk and health development programs. Individuals can be given support to identify and test those factors that are critical for wellbeing from a cultural context. Reducing discrimination and hostility against media reporting will be vital to engage in socially acceptable behaviors in order to function within the cultures. The role of the government is to address the existing factors that might inhibit collaborative service provision between the individuals and the medical providers while the role of the media can be enhanced to address information dissemination for public awareness.

There are some limitations to this study, which could be addressed in future research. In this study, only The Fiji Times was analysed. While the newspaper has the highest circulation rate in Fiji, it is unclear who actually reads The Fiji Times and how much of the health information is taken on board. The vernacular newspapers, radio and television news stories, which were not the focus of this study, may have different framing emphases and their HIV-related

news may have a better reach to the target audience.

CONCLUSIONS

We found that the majority of the articles were based on a structural frame, focusing on societal structures and issues compared to behavioral (preventive) and medical (treatment-oriented) frames. Given the central role that media plays in health literacy in the South Pacific region, there is a need for more media emphasis on behavioral and medical approaches to HIV prevention and management, as well as a closer look at how the media, working within the societal, cultural and national structures, influence which stories are given prominence. An important perspective of the findings suggests the need for the media to actively report on HIV issues to raise public awareness and discuss cultural concerns on health issues. The media, together with the government, community groups and churches form a key institution to effectively open the dialogue on HIV in order to facilitate the South Pacific region's implementation of the Combination Prevention framework.

AUTHORS' CONTRIBUTIONS

FG conceived and designed the study, collected and co-analysed the data and co-wrote the manuscript. RG performed statistical analysis, and co-wrote the manuscript. MC co-analysed the data, contributed to qualitative analysis and co-wrote the manuscript. All authors have read and approved the final manuscript.

ACKNOWLEDGEMENTS

We would like to thank Victoria Macdonald, Health and Social Care Correspondent at Channel 4 News UK for her information and advice on global trends in media reporting of HIV; Dr Santha Muller, Director of medical research at Fiji National University, for background information on HIV in Fiji; Ms Susana Verebasaga at The Fiji Times for assistance with archival material; and Michael

Goldsmith from the University of Waikato for his insightful advice on methodology.

CONFLICT OF INTEREST

Authors have declared that no competing interests exist.

REFERENCES

1. Cullen T. *Repeating mistakes: Press coverage of HIV/AIDS in Papua New Guinea and the South Pacific* [Doctoral dissertation]. Queensland: University of Queensland; 2000.
2. UNDP. *Me, my intimate partner and HIV: Fijian self-assessment of transmission risks*. Suva: UNDP; 2011.
3. Gooch N, Williams-Lahari L. Medics and the media: Developing health journalism. In Singh S, Prasad B, eds. *Media and Development: Issues and Challenges in the Pacific Islands*. Suva, Fiji: Fijian Institute of Applied Studies; Auckland: Pacific Media Centre; 2008: 73-84.
4. UNAIDS. *Combination HIV prevention: Tailoring and coordinating biomedical, behavioural and structural strategies to reduce new HIV infections*. Geneva: UNAIDS; 2010.
5. Persson A, Newman C. Making monsters: heterosexuality, crime and race in recent Western media coverage of HIV. *Social Health Ill*. 2008; 30: 632-46.
6. Entman RM. Framing: Toward clarification of a fractured paradigm. *J Commun*. 1993; 43: 51-8.
7. Bertrand JT, Anhang R. The effectiveness of mass media in changing HIV/AIDS-related behaviour among young people in developing countries. *World Health Organ Tech Rep Ser*. 2006; 938: 205.
8. Seale C. Health and media: An overview. *Social Health Ill*. 2003; 25: 513-31.
9. Bardhan N. Transnational AIDS-HIV news narratives: A critical exploration of overarching frames. *Mass Comm Society*. 2001; 4:283-309.
10. Bekalu MA, Eggermont S. Advancing HIV/AIDS Combination Prevention through mass media: a review of practices in sub-Saharan Africa. *Information Development*. 2012; 28: 189-98.
11. Clarke JN. Cancer, heart disease, and AIDS: What do the media tell us about these diseases? *Health Comm*. 1992; 4: 105-20.
12. Clarke JN, McLellan L, Hoffman-Goetz L. The portrayal of HIV/AIDS in two popular African American magazines. *J Health Commun*. 2006; 11: 495-507.

13. Clarke JN, Friedman DB, Hoffman-Goetz L. Canadian Aboriginal people's experiences with HIV/AIDS as portrayed in selected English language Aboriginal media (1996–2000). *Soc Sci Med.* 2005; 60: 2169-80.
14. Conrad P. Medicalization: Changing contours, characteristics, and contexts. In: Cockerham WC, ed. *Medical Sociology on the Move*. Netherlands: Springer; 2013: 195-214.
15. Freidson E. *Professional dominance: The social structure of medical care*. Transaction Publishers; 1970.
16. Illich I. *Medical nemesis: The expropriation of health*. New York: Bantam Books; 1977.
17. Zola IK. *Socio-medical inquiries*. Philadelphia: Temple University Press; 1983.
18. Bayer R. The medicalization of HIV prevention: New opportunities beset by old challenges. *The Milbank Q.* 2014; 92: 434-37.
19. Wong WT, Ussher JM. Life with HIV and AIDS in the era of effective treatments: 'It's not just about living longer!'. *Soc Theory Health.* 2008; 6: 117-31.
20. McAllister MP. AIDS, medicalization, and the news media. In Edgar T, Fitzpatrick MA, Freimuth VS. eds. *AIDS: A communication perspective*. Hillsdale, NJ: Laurence Erlbaum Publishers; 1992: 195-221.
21. Bishop KM. Anglo American media representations, traditional medicine, and HIV/AIDS in South Africa: from *muti* killings to garlic cures. *Geo Journal.* 2012; 77: 571-81.
22. Gounder F. Narrative perceptions and perceptions of narrative. *Te Reo: Official Journal of the Linguistic Society of NZ.* 2014; 57, 93-108.
23. Mtika MM. Political economy, labor migration, and the AIDS epidemic in rural Malawi. *Soc Sci Med.* 2007; 64: 2454-63.
24. Babalola S, Fatusi A, Anyanti J. Media saturation, communication exposure and HIV stigma in Nigeria. *Soc Sci Med.* 2009; 68: 1513-20.
25. Palar K, Mendel P, Derose KP. The organization of HIV and other health activities within urban religious congregations. *J Urban Health.* 2013; 90: 922-33.
26. Shadlen KC. The political economy of AIDS treatment: Intellectual property and the transformation of generic supply. *Int Stud Q.* 2007; 51: 559-81.
27. Bandura A. Health promotion from the perspective of social cognitive theory. *Psychol Health.* 1998; 13: 623-49.
28. Bogart LM, Galvan FH, Wagner GJ, Klein DJ. Longitudinal association of HIV conspiracy beliefs with sexual risk among black males living with HIV. *AIDS Behav.* 2011; 15:1180-6.
29. Grebe E, Natrass N. AIDS conspiracy beliefs and unsafe sex in Cape Town. *AIDS Behav.* 2012; 16: 761-73.
30. Nicoll A, Laukamm-Josten U, Mwizarubi B, Mayala C, Nyembela G et al. Lay health beliefs concerning HIV—a barrier for control programmes. *AIDS Care.* 1993; 5: 231-41.
31. Hertog JK, Fan DP. The impact of press coverage on social beliefs: The case of HIV transmission. *Comm Res.* 1995; 22: 545-74.
32. Romer D, Sznitman S, DiClemente R, Salazar LF, Vanable PA, Carey MP et al. Mass media as an HIV-prevention strategy: Using culturally sensitive messages to reduce HIV-associated sexual behavior of at-risk African American youth. *Am J Public Health.* 2009; 99: 2150.
33. Agarwal S, de Araujo P. Access to Media and HIV Knowledge in India. *Economies.* 2014; 2: 124-46.
34. Muli I, Lawoko S. The relationship between access to mass media and HIV/AIDS related knowledge, beliefs and behaviours in Kenya. *Psychology.* 2014; 5: 736-43.
35. Oyekale AS, Oyekale TO. Application of health belief model for promoting behaviour change among Nigerian single youths: Original research. *Af J Reprod. Health.* 2010; 14: 63-75.
36. Shukla P, Pradhan M. HIV risk behaviors and risk beliefs among young adults. *IJHW.* 2013; 4: 1120-3.
37. Brodie M, Hamel E, Brady LA, Kates J, Altman DE. AIDS at 21: Media coverage of the HIV epidemic 1981-2002. *CJR.* 2004: 1-8.
38. Schudson M. *The sociology of news*. New York: Norton; 2003: 64-89.
39. Andrews KT, Caren N. Making the news movement organizations, media attention, and the public agenda. *Am Sociol Rev.* 2010; 75: 841-66.
40. Hodgetts D, Masters B, Robertson N. Media coverage of 'decades of disparity' in ethnic mortality in Aotearoa. *J Community Appl Soc Psychol.* 2004; 14: 455-72.
41. Wallack L. The role of mass media in creating social capital: A new direction for public health. In Hofrichter R, ed. *Health and social justice: Politics, ideology, and inequality in the distribution of disease*. San Francisco: Jossey-Bass; 2003: 594-625.
42. Abrams LC, Maibach EW. The effectiveness of mass communication to change public behavior. *Annu Rev Public Health.* 2008; 29: 219-34.
43. Bogart LM, Skinner D, Weinhardt LS, Glasman L, Sitzler C, Toefy Y et al. HIV misconceptions may be associated with condom use among black South Africans: an exploratory analysis. *Afr J AIDS Res.* 2011; 10: 181-7.

44. Jesmin S, Chaudhuri S, Abdullah S. Educating women for HIV prevention: does exposure to mass media make them more knowledgeable? *Health Care Women Int.* 2013; 34: 303-31.
45. Boer H, Emons P. Accurate and inaccurate HIV transmission beliefs, stigmatizing and HIV protection motivation in northern Thailand. *AIDS Care.* 2004; 16: 167-76.
46. Earnshaw V, Kalichman S. Stigma experienced by people living with HIV/AIDS. In Liamputtong P, ed. *Stigma, Discrimination and Living with HIV/AIDS.* Springer Netherlands; 2013: 23-38.