Barriers and Strategies to Prevent HIV/AIDS among Pacific Countries: A Systematic Review Study

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Abstract

Introduction: While the prevalence of HIV/AIDS is shown to be decreasing in the last few decades, it still remains a serious public health issue in Pacific countries. This study is aimed to review the common barriers and also preventive strategies for HIV/AIDS among Pacific Islanders. Methodology: This systematic review study on HIV/AIDS was developed based on the Cochrane Library Guideline. Seven online databases which were more frequently used in finding relevant studies were used to search literatures. Using relevant key words, all studies found in the search were reviewed by two independent reviewers and their quality and relevance were assessed. All previous qualitative and quantitative published articles included in the study were published from 2000 to 2016 and in the English language. A data extraction sheet was developed and a descriptive statistic was used to analyze the data. Results: Twenty-two studies met the study inclusion and exclusion criteria. It also provides a guide for decision makers to develop and implement new strategies which are sensitive and based on Pacific cultures and beliefs.

Keywords

HIV/AIDS, Barriers, Preventive Strategies, Pacific Islanders
1. Introduction

The human immunodeficiency virus (HIV) has become one of the leading causes of
death around the globe today [1]. HIV causes acquired immune deficiency syndrome
(AIDS) and attacks the body’s immune system. This deadly disease claims many lives
each year and is said to be more common in low and middle income countries [2].
Globally, the figure of people currently living with HIV/AIDS in 2015 was estimated to
be more than 35 million [3]. According to the United Nations program for HIV/AIDS
(UNAIDS) in 2016, out of that estimated more than 35 million, 19 million of them were
from eastern and southern Africa, 6.5 million from western and central Africa, 5.1 mil-
lion from Asia and the Pacific, 2.4 million from Western and central Europe and North
America, while Latin America and the Caribbean accounted for 2 million cases, eastern
Europe and central Asia had 1.5 million and 230,000 cases were from the Middle East
and northern Africa [4]. The World Health Organisation also reported that HIV/AIDS
accounted for the death of 1.1 million people in 2015 [5]. Even though there is no cure
for HIV/AIDS, it can still be prevented [3].

Moreover, HIV barriers can be seen as a factor which has contributed to the rise of
HIV/AIDS globally [6]. In Africa, some of the barriers are economic barriers, social and
cultural barriers and legal barriers [7]. While in China, stigma and punitive barriers are
barriers which prevent HIV identification [8]. In comparison to Europe, perceptions of
patients and attitude of health care providers are barriers [9]. In the Pacific, cultural
barriers, access to health services, stigma and cost of medication were recognized as
common barriers for HIV patients in Papua New Guinea (PNG), Vanuatu and Pacific
Islanders in America [10] [11] [12].

Even though HIV/AIDS cannot be cured it can still be treated so the only way to les-
sen the number of HIV/AIDS patients is to have some preventive strategies [13]. There
are different methods of HIV/AIDS prevention. The most common strategies include:
attempting to postpone the onset of first intercourse, reducing the number of sexual
partners, increasing the number of sexual protective activities, offering counselling and
testing for HIV, encouraging adherence to biomedical approaches avoiding HIV
transmission, reducing sharing of needles, and syringes and decreasing substance use
[14]. In Africa, their preventive strategies are condoms, prevention of mother to child
transmission, voluntary medical male circumcision, harm reduction and antiretroviral
treatment [15]. In the United States, some of their strategies are: programs to combat
stigma and discrimination, increased open communication about sexual activities, multi-
sectorial approaches and STI surveillance and control [16]. In the United Kingdom,
prevention programs for MSM, harm reduction, HIV awareness and prevention pro-
grams for Africans who settle in UK are some of their preventive strategies [17]. Whe-
reas in China there is prevention of infected blood donation and transfusion practices
in place [18]. In the Pacific, there is increased awareness, health education, vaginal mi-
cro biocide and distribution of condoms in PNG, Vanuatu, Federated States of Micronesia
(FSM), Fiji, Tonga, Samoa, Hawaii and American Pacific Islanders [19]–[24].

From the literature reviews carried out by now, no systematic reviews have been
done on HIV/AIDS in the Pacific. This systematic review aims to identify the barriers
and strategies of HIV/AIDS prevention in the Pacific region. This will help fill the gap
and help health workers in the Pacific create the best health promotion strategies which can help combat and lessen the number of HIV/AIDS patients among Pacific Islanders.

2. Methods

This systematic review study was developed according the Cochrane Library Guideline. To achieve a broad spectrum of the HIV/AIDS related barriers among Pacific Islanders, both qualitative and quantitative studies were considered. To prevent potential barriers in selecting the articles and extracting the relevant results, and also analyzing and interpreting the results, two independent reviewers were used. They discussed any issues encountered in any stage of review and they discussed the issues with the other authors to get an agreement.

Considering previous studies conducted in the field of HIV/AIDS, seven online databases, which were more frequently used in finding relevant studies, were used including: MEDLINE/PubMed, CINAHL, ISI Web of Science, EBSCO, ProQuest, Springer and PsycInfo. Different keywords were used to find relevant articles. They were “barriers” AND “strategy” and “policy” AND “intervention”.

Any articles published in any online peer-reviewed journals between 1st January 2010 and 1st August 2016 were included in the study. This time period was chosen as we were able to review the recently published studies and also look at new insights on appropriate preventive strategies towards HIV/AIDS which are applicable for Pacific islanders. Moreover, articles were considered if they were conducted among both males and females, all age groups, were in the English language, and focused on Pacific countries. In this study, barriers of HIV/AIDS can be considered as: all individual, social, cultural, and organizational obstacles which restrict people’s knowledge of HIV prevention, access to healthcare systems, doing HIV testing, and also to treatment of HIV. Studies focused on HIV/AIDS determinants or prevalence were excluded.

A narrative search was implemented in three stages. First, the abstracts of all researched articles were scanned and those that were not relevant or were duplicated were excluded from the first stage. The abstract of the remaining articles were reviewed and some articles were omitted at this stage if they didn’t meet the study inclusion and exclusion criteria. At the last stage, the full text of all remaining articles was printed and reviewed to assess their quality. Another search was conducted on the bibliographies of the remaining articles to locate other unpublished article titles. The additional search was performed using various Internet resources.

A data extraction sheet was made to include all relevant information needing to be analyzed. They included the article’s characteristics (the year published, country of the study, type of study), participants characteristics (age, gender, number), methodology (data collection tools, sampling method, place of the study), and the results. Overall, 17 studies met the study inclusion and exclusion criteria. The search process is shown in Figure 1.

In addition, we found another 5 articles in the bibliography of the remaining articles. Finally, 22 studies were reviewed in this study.

A descriptive analysis was applied to analyze the data. The results were reported as percentages and frequencies using tables and graphs.
3. Results

The general characteristics of the studies are shown in Table 1. Many studies were conducted after 2010 (54.5%). Half of the studies were conducted in American Pacific countries. Four studies (18.2%) were conducted among only males, however, many studies did not report the gender of target groups (45.5%).

The results of the studies showed that the United States had the highest number of studies about HIV/AIDS (11 studies), followed by Papua New Guinea (5 studies), Vietnam (4 studies), and Vanuatu and Thailand (3 studies each). The study results revealed that many were studies conducted among Adolescents/Adults (31.8%), however, 40.9% didn’t report the age of participants. The results also showed that the pooled number of participants in the studies was 26,641 people. The study also showed that most of the studies focused on Gay/Men who have Sex with Men (5 studies) and health care workers (5 studies) as target groups, followed by HIV patients (3 studies), female sex workers (3 studies), and young adults & parents (3 studies).

As Table 2 shows, a majority of the studies applied quantitative methodology (45.5%). Ten studies used questionnaires to collect the data. Purposive sampling (50%) was the most common sampling method.

As Figure 2 shows, the majority of studies were community based studies (72.7%) followed by school based studies (18.2%) and health care center-based studies (9.1%).
### Table 1. General characteristics of the studies (N = 22).

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<tr>
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<th>Frequency</th>
<th>Percentage</th>
</tr>
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<tr>
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### Table 2. Methodological characteristics of studies (N = 22).

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<tr>
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<tr>
<td>In depth interview</td>
<td>4</td>
<td>18.1</td>
</tr>
<tr>
<td>Focus group discussion</td>
<td>6</td>
<td>27.3</td>
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<tr>
<td>Questionnaires and screening</td>
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<td>4.5</td>
</tr>
<tr>
<td>Unknown</td>
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<td></td>
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<tr>
<td><strong>Sampling methods</strong></td>
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<tr>
<td>Convenience</td>
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<tr>
<td>Snowball</td>
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<td>22.7</td>
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<tr>
<td>Purposive</td>
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<td>50</td>
</tr>
<tr>
<td>Random</td>
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</tr>
<tr>
<td>Stratified</td>
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</table>
Barriers of HIV/AIDS among patients

Out of 22 studies, 8 quantitative studies highlighted the barriers of HIV/AIDS among Pacific Islanders. The most common barriers have been recognised as lack of accessibility to health services (3 studies, 37.5%), followed by lack of knowledge (2 studies, 25%). The cultural taboos and ethnicity have been recognised as the least barriers among Pacific Islanders (1 study each).

Out of 22 reviewed articles, 10 qualitative studies focused on barriers. The most common barriers were cultural barriers (5 studies, 50%), followed by access to health services (3 studies, 30%) among Pacific Islanders. The least barriers were racism and lack of sex education (1 study each).

Strategies to prevent HIV/AIDS

Out of 11 quantitative studies, 3 mentioned strategies to prevent HIV/AIDS. Two out of the 3 studies found educational training on sexual health topics to be the main strategy, followed by diagnostic prevention, including the symptoms of HIV/AIDS (1 study).

Only one qualitative study suggested using preventive methods such as intravaginal practices (vaginal microbicides) as a strategy to prevent HIV.

4. Discussion

From the results, this study recognized culture as one of the common barriers, which may have contributed to HIV/AIDS in the Pacific [21] [25]. In the Pacific, culture can be seen as one of the essentials to maintaining national, ethnic or group identity [26]. Culture becomes a barrier in a sense that it will be considered culturally inappropriate for parents to openly discuss sexual health with their children [27] [28]. Sexual health is a very sensitive topic and it cannot be openly discussed within the family and community as this will not be acceptable in the Pacific culture [28]. In 2011 a study done in Africa [29], and another done in China, [30], it was highlighted that sex related topics are still seen as a taboo subject in the respective cultures and is hardly discussed openly by most African or Chinese families.

Another barrier among Pacific Islanders identified in this study was access to health services [11]. One reason is geographical locations as the islands are scattered so the remote places cannot easily gain access to health services because they live far from the health centres [10]. Another reason would be that services provided in the urban hospitals vary from health services available in rural health centres due to hospitals being
more advanced than rural health centres [31]. As further discussed by Silal et al., (2012) [32], in Africa, lack of transportation, long hours of travel and remote areas do not have good access to health services compared to urban centres. Cost of medications could be another possible factor, only allowing people with high economic status to have access to good health services [11]. This is because Pacific islands are still developing countries and the hospitals have limited resources available, compared to private clinics which have more advanced technologies to detect diseases quickly [33]. This is common in low income countries in the Pacific where people with high economic status have better access to good health care [34], compared to a study done among American Pacific Islanders in America which showed people with low economic status do not have access to good health care and those with high economic status have access to good health care [35].

The study also identified stigma as another barrier being faced by those people living with HIV/AIDS [36]. According to Jenkins, stigma becomes a barrier to HIV testing as it hinders people to go for HIV testing because they fear their families, friends and everyone will reject them if they have HIV/AIDS, as supported by Kang et al. (2006) [37]. Meiberg, et al. (2008) also added that stigma is also a barrier to voluntary HIV testing and counselling in South Africa [38].

Prevention is better than cure, so the best strategy to fight HIV is to prevent it [39]. From this study, many of the studies pointed out the common strategy which has been practiced is educational trainings or awareness. As further explained by Ramos et al. (2009) [40], health education is the best strategy which can be successfully implemented and easily carried out by any health worker. Another recommended prevention method is vaginal microbiocide. Vaginal microbiocide is a safe and effective prevention method for HIV and STIs because it can help kill and neutralize viruses and bacteria, and is said to decrease the chances of HIV by 27% [19] [41].

Most of the studies reviewed were conducted after 2010, showing that many researchers have gotten interested in studying HIV/AIDS recently. Most of the studies reviewed were descriptive, followed by retrospective and cross-sectional, but lack interventional studies, which were said to provide the most reliable evidence [42].

Furthermore, as shown from the results, 68.2% of the studies were conducted in the community and only 18.2% of the studies were conducted in schools. More studies should have been conducted in schools to provide information on HIV/AIDS to adolescents as they tend to engage in sexual behaviours and other risk behaviours, so as to help prevent the increase of HIV in the future [43]. In addition, purposive sampling method was mainly used but randomized control sampling is preferable because it gives quality results and reduces bias [44].

Therefore, as shown in our results, culture is the most common barrier, followed by access to health services and stigma. To address the previously stated barriers, interventions need to be done. Thus, the best strategy to address cultural barriers is to conduct health education regarding HIV based on different genders. Health services and health workers should reach out to people who cannot access health services. The result of this study provides a guide for policy makers to develop and implement new strategies which are sensitive and based on Pacific cultures and beliefs.
A limitation in this study was that only English language publications were searched for. This may affect accessibility to other valuable studies that were published in languages other than English.

References


[34] Kaplan, J.E., et al. (2015) The Impact of HIV Care and Support Interventions on Key Out-


<table>
<thead>
<tr>
<th>No.</th>
<th>Study/Article</th>
<th>Participants</th>
<th>Methods</th>
<th>Results</th>
</tr>
</thead>
</table>
| 1.  | DiStefano et al. [12] | **Participants:** Young Adults/Parents  
**Number:** 95  
**Male:** Not Stated  
**Female:** Not Stated  
**Age:** Not Stated  
**Data Collection Tools:** unknown  
**Sampling methods:** unknown  
**Place:** Community based | **Barriers:**  
1. Trust  
2. Religion cultural taboo  
3. Fear |
| 2.  | Kang et al. [37] | **Participants:** HIV + API  
**Number:** 44  
**Male:** 36  
**Age:** 31 - 60 yrs  
**Mean Age:** 44, SD: 7.94  
**Female:** 5  
**Age:** 36 - 67 yrs  
**Mean age:** 45, SD: 12.82  
**Transgender:** 1  
**Age:** 47  
**Data Collection Tools:** Interview  
**Sampling Method:** Non-random convenience sample  
**Place:** Community based | **Barrier:**  
1. Stigma |
| 3.  | Kennedy et al. [10] | **Participants:** Adolescents, Policy makers & service providers  
**Number:** 341  
**Male:** 169  
**Female:** 172  
**Age:** 15 - 19 yrs.  
**Data collection Tools:** Focus group, Interview  
**Sampling Method:** Purposive sample  
**Place:** Community based | **Barriers:**  
1. Culture  
2. Taboos  
3. Lack of confidentiality  
4. Lack of Knowledge |
| 4.  | Lee and Rotheram-Borus, [45] | **Participants:** students  
**Number:** 13233  
**Female:** Not Stated  
**Male:** Not Stated  
**Age:** below 14 to 18+  
**Data Collection Tools:** Questionnaire  
**Sampling Methods:** Random sample  
**Place:** School Based | **Barriers:**  
1. Parental communication |
| 5.  | Han, [46] | **Participants:** Gay, Bisexual & Queer Asian Pacific Islander Men  
**Number:** 15  
**Male:** 15  
**Female:** Not stated  
**Age:** 18 - 50+  
**Data Collection Tools:** Focus group, Interview  
**Sampling Method:** Convenience Sampling  
**Place:** Community based | **Barrier:**  
1. Racism  
2. Homophobia  
3. Low self esteem  
4. Negative role model |
| 6.  | DiStefano et al. [47] | **Participants:** Young adults, Parents, Health workers  
**Number:** 95  
**Female:** Not Stated  
**Male:** Not Stated  
**Data Collection Tools:** Focus group, Interview  
**Sampling Method:** Purposive  
**Place:** Community based | **Barrier:**  
1. Misinformation  
2. Communication  
3. Perceptions  
4. Family shame  
5. Privacy  
6. Gender  
7. Parents role  
8. Religion |
| 7.  | Linh et al. [48] | **Participants:** Government officials, Health workers, business members, civil society leaders  
**Number:** 20  
**Female:** Not Stated  
**Male:** Not Stated  
**Age:** Not Stated  
**Data Collection Tools:** Interview  
**Sampling Method:** Snowball  
**Place:** Population base | **Barrier:**  
1. Cost  
2. Overprotected owner rights |
8. Smith et al. [49]  
**Year:** 2003  
**Countries:** Brunei, Cambodia, China, Indonesia, PNG, etc.  
**Type of Study:** Descriptive study  
- **Participants:** Adults  
  - **Number:** 150  
  - **Female:** Not stated  
  - **Male:** Not Stated  
  - **Age:** Not Stated  
- **Data Collection Tools:** Questionnaires  
- **Sampling Method:** Snowball  
- **Place:** School based  
- **Barriers:** 1. Perceptions  
  2. Lack of knowledge

9. Reidpath and Chan, [50]  
**Year:** 2005  
**Country:** China, India, Indonesia, Philippines, Thailand, Vietnam  
**Type of Study:** Descriptive  
- **Participants:** 6 countries  
  - **Number:** Not Stated  
  - **Female:** Not Stated  
  - **Male:** Not Stated  
  - **Age:** Not Stated  
- **Data Collection Tools:** Interview, Focus group  
- **Sampling Method:** Convenience sampling  
- **Place:** Community Based  
- **Barriers:** 1. Culture

10. Fujita et al. [51]  
**Year:** 2015  
**Country:** Cambodia, Myanmar, Nepal, PNG, Thailand, Vietnam  
**Type of Study:** Descriptive  
- **Participants:** Sex workers, Drugs users  
  - **Age:** 15 - 19 yrs.  
  - **Female:** Not Stated  
  - **Male:** Not Stated  
- **Data Collection Tools:** Interview, Focus group  
- **Sampling Method:** Convenience sampling  
- **Place:** Community Based  
- **Barriers:** 1. Culture

11. Hahm et al. [52]  
**Year:** 2009  
**Country:** USA  
**Type of study:** Cohort  
- **Participants:** HIV Patients  
  - **Number:** 114  
  - **Mean age:** 38.7 yrs, SD: 9.3  
- **Data Collection Tools:** Questionnaire  
- **Sampling Method:** Cluster Sampling  
- **Place:** Health care based  
- **Barriers:** 1. Ethnicity  
  2. Unavailability of services

12. Wong et al. [53]  
**Year:** 2004  
**Country:** USA  
**Type of study:** Descriptive study  
- **Participants:** API men sex men  
  - **Male:** 445  
  - **Age:** ≥18 yrs, Mean age: 30.7 SD: 10.3  
- **Data Collection Tools:** Screening Test, Questionnaires  
- **Sampling Method:** Purposive  
- **Place:** Community Based  
- **Barriers:** 1. Language  
  2. Perceptions  
  3. Fear of disclosure

13. Wong et al. [54]  
**Year:** 2012  
**Country:** USA  
**Type of study:** Cross sectional Study  
- **Participants:** Health Care Providers  
  - **Number:** Not Stated  
  - **Female:** Not Stated  
  - **Male:** Not Stated  
  - **Age:** Not Stated  
- **Data Collection Tools:** Questionnaire  
- **Sampling Method:** Cluster Sampling  
- **Place:** School based  
- **Barriers:** 1. Limited resources  
  2. Cost of Medications

**Year:** 2007  
**Country:** 22 Pacific Island Countries (PNG, Palau, Fiji, Niue etc)  
**Type of Study:** Descriptive  
- **Participants:** Health Care Providers  
  - **Number:** Not Stated  
  - **Female:** Not Stated  
  - **Male:** Not Stated  
  - **Age:** Not Stated  
- **Data Collection Tools:** Questionnaire  
- **Sampling Method:** Purposive  
- **Place:** Community based  
- **Barriers:** 1. Lack of awareness  
  2. Unavailability of services

15. MacLaren et al. [55]  
**Year:** 2013  
**Country:** PNG  
**Type of Study:** Descriptive  
- **Participants:** Staff & Students  
  - **Number:** 284  
  - **Male:** 137  
  - **Female:** 46  
  - **Age:** 18+ yrs  
- **Data Collection Tools:** Focus groups  
- **Sampling Method:** Observation  
- **Place:** School based  
- **Barriers:** 1. Time  
  2. Cultural

16. Huang et al. [56]  
**Year:** 2008  
**Country:** USA  
**Type of Study:** Descriptive study  
- **Participants:** Non MSM adults  
  - **Number:** 604  
  - **Age:** 18 - 45 yrs.  
- **Data Collection Tools:** Questionnaire  
- **Sampling Method:** Snowball  
- **Place:** Community based  
- **Barriers:** 1. Lack of knowledge  
  2. Unavailability of health personnel

17. Meldrum et al., [57]  
**Year:** 2016  
**Country:** Australia  
**Type of Study:** descriptive  
- **Participants:** Young Muslim Women  
  - **Number:** 11  
  - **Female:** 11  
  - **Age:** 18 - 25 yrs.  
- **Data Collection Tools:** Interview  
- **Sampling Method:** Purposive sampling  
- **Place:** Community based  
- **Barriers:** 1. Culture  
  2. Religion
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