

## Combating Zika virus through health counseling interventions

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### Abstract

Previous research efforts on Zika virus (ZikV) appear to have only focused on biomedical interventions for the patients without realizing that their culture of silence to the psychological aspect is highly reprehensible. The role and importance of health counseling cannot be overemphasized given how it helped in the fight against the Ebola virus disease. It is possible that mental health counselors and clinical psychologists around the world, Nigeria, and Pakistan can provide health counseling intervention that is culturally acceptable, effective and instrumental in tackling ZikV, its spread, and the horrific psychological impacts of the disease. Research is needed to understand the relevance and effectiveness of health counseling interventions in the Zika context.

**Keywords:** Zika virus, Health counseling, Interventions, Commit and ACT, Prosocial counseling.

### Introduction

Zika virus (ZikV), a flavivirus in the family of the Flaviviridae is a mosquito-borne pathogen which was first discovered in rhesus monkeys in 1947 in the Zika forest of Uganda, from where the virus derived its name. However, the first evidence of human infection by ZikV was recorded in 1952 by Smithburn.<sup>1</sup> Recently, the spread of ZikV has been associated with increases in Guillain-Barre syndrome and Microcephaly.<sup>2</sup>

Several efforts to combat this epidemic began many decades ago when Simpson reported the isolation of ZikV from a human being in 1964 in Uganda.<sup>3</sup> More recently, animal models of ZikV pathogenesis which mimics features of Zika virus infection in humans, have been developed for evaluating vaccines and therapeutics as well as understanding the disease pathogenesis and the evidences have been published in scholarly journals.<sup>2,4-6</sup> But prior to this 21st century when the ZikV outbreak was declared a Public Health Emergency of International Concern (PHEIC) by World Health Organization<sup>7,8</sup> research scientists and physicians seem to have had limited access to research evidence and data regarding most infectious

diseases, including the ZikV. Generally, the case for sharing data, and the aftermath of the refusal to do so served as great impediment to the data sharing paradigm in the biomedical science research during the previous centuries. However, in recent times, it is widely acknowledged that an important part of the response to any public health emergency of international concern is research and this advancement has become particularly essential for emerging infectious diseases, such as the ZikV, given that much is still unknown about the virus and no cure available till date.<sup>7</sup> The point here is that as research data is being shared, all practitioners in the healthcare system would have access to relevant information, knowledge and materials on how the people can be guided to reduce spread of the virus.

Thus far, in spite of the emerging knowledge about the ZikV, concerns remain regarding the virus's vectors and reservoirs, pathogenesis, genetic diversity, and potential synergistic effects of co-infection with other circulating viruses.<sup>9</sup> In the light of the current ZikV outbreak which has caused a number of deaths in different parts of the world including the Americas, Asia, Pacific and Africa, it is essential to focus on encouraging interdisciplinary research collaboration that would spur all professionals in the healthcare system, including mental health counselors and clinical psychologists with public health background to action in combating the epidemic. As a result, it becomes pertinent that current global effort continues to stress on how available research evidence and data on ZikV could be shared among research scientists, healthcare professionals and physicians worldwide. In this regard, leading international health bodies, academic journals, not-for-profit groups, research funders and institutes, have [and must] remain committed to sharing data and results relevant to the current ZikV crisis and prospective public health emergencies as quickly and explicitly as possible.<sup>10</sup>

Additionally, given that an effective treatment or a vaccine is still unavailable for ZikV, the current public health response must also focus on preventing infections, mainly in the world's pregnant women as a recent study shows evidence of ZikV infection during pregnancy.<sup>11</sup> Nevertheless, the Emergency Committee (EC) of the World Health Organization recommended that the world

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pregnant women who have been exposed to Zika virus should be counseled.<sup>12</sup> Thus, healthcare professionals trained in psychological and mental health counseling need to focus on implementing health counseling interventions aimed at: alleviating the psychosocial and mental health needs of world pregnant women and women of childbearing age who are exposed to the ZikV; and ensuring that women of childbearing age and mostly pregnant women have all the essential information and resources to minimize risk of exposure.

Until this time, previous research endeavors on the ZikV have only focused on biomedical interventions for the patients without realizing that their culture of silence to the psychological aspect is highly reprehensible. However, the World Health declaration of the virus as a Public Health Emergency of International Concern (PHEIC) is an indication that a successful breakthrough might be achieved when collaborative research in which physicians exchange not only their data but also derive from a pool of multidisciplinary experience, an understanding to promote surveillance, patient management, and public health intervention on ZikV is embraced. Therefore, besides clinical observations and biomedical interventions, physicians who care for those patients with ZikV disease must begin to support an interdisciplinary research approach to ZikV management in both low-and middle-income countries where the virus is a serious endemic.

Though the impact of psychological treatment is often neglected by most physicians, it is possible that the family members of those infected by the ZikV would become traumatized and heartbroken by the sudden death of their loved ones. Moreover, the patients themselves might also experience undignified dying, regrets and anguish knowing that their death is near and inescapable and their plans, hopes and aspirations are being cut short. Thus, if cognitive-behavioural health counseling interventions, for instance, are not supported and implemented at this time so as to alleviate the psychosocial and mental distress of those people infected and those affected by the ZikV epidemic, the potential health outcomes might even be more devastating than the virus itself. Since there is no vaccine or specific antiviral drug treatment for ZikV infection and as such, treatment is directed primarily at relieving symptoms using anti-pyretics and analgesics,<sup>8</sup> the rendering of trauma-focused counseling therapy might as well be of help.

Arguably, future researches need to be more collaborative and interdisciplinary to facilitate research evidence and

data sharing on emerging infectious diseases of international concern. With such trend, the mental health needs of the pregnant women and those of child-bearing age which have been wholly ignored in the light of the on-going ZikV epidemic researches could be attended to by mental health counseling professionals in the healthcare system. More so, the world pregnant women and family members must be given all available psychosocial and mental health assistance and resources to enable them remain protected against the ZikV infection. In this respect, one of the plausible ways to achieve this could be through evidence-based interventions that would utilize a health counseling model from a public health perspective.

### **Role and Importance of Health Counseling**

It is worth noting that the role of health counseling interventions in the context of Ebola virus disease (EVD) and how it helped curb that epidemic cannot be overemphasized. Through health counseling interventions, healthcare personnel were able to adopt additional infection control steps to prevent transmission of EVD. During the EVD outbreak, the focus of the health counseling interventions seem to have included but was not limited to: increasing the performance of screening relying only on temperature screening; identification of possibly contagious travelers who were missed by temperature screening; and identification of travellers who had high-risk exposure and then enroll them in monitoring schemes or quarantine.<sup>13</sup>

Additionally, the importance of health counseling interventions in the context of EVD and how it helped curb the epidemic is very obvious. Health counseling interventions were designed to help meet the informational needs of healthcare professionals, communities and family members of Ebola-infected persons. Thus, there were numerous health counseling resources and self-help materials available to healthcare personnel and families to educate them about the epidemiological characteristics, prevention and control measures of EVD.<sup>14-20</sup> These resources also helped a great deal in meeting the health and psychosocial needs and concerns of communities about EVD. Yet, it appears that the need for health counseling interventions has been wholly neglected in the Zika context. For instance, of the several studies focusing on the ZikV,<sup>21,29</sup> none made attempt to call to action the implementation of health counseling interventions to combat this epidemic. Thus, we argue that previous studies have wholly ignored the need for health counseling interventions in the context of the ZikV. Given the import of health counseling, Goodnough and Marques<sup>30</sup> urged clinicians and

transfusion medicine specialists to endeavor to implement perisurgical patient blood management strategies to avoid blood component transfusions with their potential risks of emerging pathogens. Further, the use of some alternative models of health education could be useful in the ZikV context (e.g. the Commit and ACT project in Bo province in Sierra Leone, based on Acceptance and Commitment Therapy)<sup>31</sup> in that it was helpful to counselors in working with communities in the Ebola-infected regions to increase people's acceptance of health workers, change those health risk behaviours ingrained in local culture (e.g. burial customs which involved close contact with the deceased), and provide psychosocial supports to those people whose communities were torn apart by EVD. During the EVD crisis, the commit and act counselors also used video in large community meetings to explain to people what the Ebola virus is and how it spreads in the Bo province in Sierra Leone.<sup>31,32</sup>

Thus, health counselors can meet with communities to discuss about ZikV and how it is transmitted; and model such as prosocial care counseling approach could be adopted. During the Ebola prevention campaign, health counselors used the prosocial care counseling approach to find solutions for more hygienic behaviour that prevented new infections. Through prosocial care counseling approach, counselors helped people to change their burial rituals in a way which was acceptable to their own culture.<sup>32</sup> In the light of the prosocial care counseling, people were able to use the trunk of a banana tree instead of the dead body of an EVD victim to do the traditional burial rituals. The prosocial care counselors helped the people to develop a willingness and acceptance that they are not avoiding the pain, but only going through the pain of not completing the traditional rituals and using alternative rites instead. Additionally, by highlighting how the new behaviours align with the people's core values - to take care of their living family and community - people became willing to accept and commit to the changes in their behaviour.<sup>32</sup> Thus, the interventions of health counselors contributed to slowing down the increase of new infections in communities where they were initiated, for instance, Bo province.

## Conclusion

Given the role and importance of health counseling interventions as identified in this paper, the authors would like to emphasize that by prioritizing and working with what is important to a given person or community, mental health counselors and clinical psychologists around the world, Nigeria, and Pakistan can provide a therapy that is culturally acceptable, effective and

instrumental in tackling ZikV, its spread, and the horrific psychological impacts of the disease. Research is needed to understand the relevance and effectiveness of health counseling interventions in the Zika context.

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