Revista INTERFAZ
Vol. 3, Nro. 2, 2024

https://doi.org/10.57201/interfaz.2024.3.2.4714

Original article

Knowledge and attitudes of obstetric professionals regarding ZIKA for care during pregnancy. Reference hospitals of San Lorenzo – Central Department 2024

Conocimientos y actitudes de profesionales obstetras sobre zika para el cuidado durante el embarazo. Hospitales de Referencia de San Lorenzo - Departamento Central. 2024

Kuaapy ha tekoite mba'apoharaitegua oporomomembýva Zika rehegua oñeñangareko hagũa tyeguasu aja. Tasyo Ojeporavóva San Lorenzo-pegua – Tetãvore Central 2024

Edgar Samudio[1]

[1] Universidad Nacional de Asunción, Facultad de Ciencias Médicas. Asunción, Paraguay

Abstract

Zika is a prevalent disease that also affects pregnant women and newborns, the latter presenting microcephaly, central nervous system malformations, low birth weight, among others. It is transmitted mainly through the bite of Aedes Aegypti. In Paraguay, cases were reported in Amambay, Paraguarí, Central, Asunción and Alto Paraná. Objective: to recognize the knowledge and attitudes of obstetricians about Zika for care during pregnancy. Methodology: observational, descriptive study, convenience sampling of consecutive cases, survey adapted from the PAHO/WHO epidemiological surveillance system to 53 obstetricians (100%). Results: Regarding knowledge, they answered correctly: concepts 53 (100%), symptoms 49 (92%) and diagnostic method 53 (100%); incorrectly: duration of symptoms 35 (66%); how it affects pregnant women and effects on children 33 (62%); they did not answer what care to recommend during gestation, use of repellents and/or elimination of the vector. Regarding attitude, they are willing to promote the use of protective clothing and repellents (100%); home disinfection (91%) and rest (85%), 100% agree that combating/reducing mosquitoes and avoiding bites by applying repellents, eliminating breeding sites, consulting in case of symptoms and of course not self-medicating is important. Conclusion Obstetricians have favorable knowledge and attitudes about health actions, but require refresher workshops on care.

Key Words: knowledge - attitudes - zika - use of repellents - obstetrics professionals

Resumen

El zika es una enfermedad prevalente, afecta también a gestantes y recién nacidos, en este último presenta microcefalia, malformaciones del sistema nervioso central, bajo peso al nacer entre otros. Se transmite principalmente a través de la picadura del Aedes Aegypti. En Paraguay fueron reportados casos en Amambay, Paraguarí, Central, Asunción y Alto Paraná. Objetivo: reconocer los conocimientos y actitudes de profesionales obstetras sobre zika para el cuidado durante el embarazo.

Corresponding author
esamudio@rec.una.py

Conflict of interest
The author declares that there is no conflict of interest.

Funding
Study funded with author's own capabilities and resources.

History
Received: 20/09/2024
Accepted: 25/02/2025

Metodología: estudio observacional, descriptivo, muestreo por conveniencia de casos consecutivos, encuesta adaptada del sistema de vigilancia epidemiológica de la OPS/OMS a 53 obstetras. Resultados: Respecto a conocimientos han respondido correctamente: conceptos 53 (100%), síntomas 49 (92%) y método diagnóstico 53 (100%); incorrectamente: tiempo duración de síntomas 35 (66%); cómo afecta a las embarazadas y los efectos en los niños 33 (62%); no respondieron que cuidados recomendar durante la gestación, usar repelentes y/o eliminar el vector. Acerca de la actitud están dispuestos a promover uso de vestimenta protectora y repelentes (100%); desinfección del hogar (91%) y guardar reposo (85%), el 100% coincide que combatir / reducir los mosquitos y evitar las picaduras aplicando repelentes, eliminar criaderos, consultar ante síntomas y por supuesto no automedicarse. Conclusión los participantes poseen conocimientos y actitudes favorables sobre acciones sanitarias, pero requieren talleres de actualización sobre cuidados.

Palabras clave: conocimientos - actitudes - zika – uso repelentes - profesionales obstetras

Haipavy

Zika ha'e peteĩ mba'asy oiko'aréva, ojapyhykuaáva hyeguasúva ha mitã ho'ararecha ramóvape, ko ipahapeguápe ome'ẽkuaa akãñyñýi (microcefalia), tajukuéra mbyte reko ñembyai, ivevuive ho'ararechávo ambue mba'e apytépe. Ovakuaa ñati'ũ jurupuku jekutu rupive (Aedes Aegypti). Paraguay-pe oñemombe'u oĩ hague Amambay, Paraguari, Central, Asunción ha Alto Paraná-me. Jehupytyvoirã: Tojehechakuaa oporomomembýva kuaapy ha reko mba'apoharaitegua tyeguasu ñeñangareko aja. Taperekokuaaty: kuaapyhyrã ojepuru jesareko, ta'ãngahai, hechapyporavo (muestreo) tekotevẽháicha mba'e ojoapykueriguáva, poranduhai ojejapóva 53 oporomomembývape peteĩ tendaguasu ñangarekohára rekópe OPS/OMS-guávape. Ha'arõmby: kuaapy rehegua ombohovái hekoitépe: he'iséva 53 (100%), ñeñandu rehegua 49 (92%) ha tapereko ñehesa'ỹijogua 53 (100%); hekope'ỹ: ñeñandu ára pukukue 35 (66%); mba'éichapa ombyai hyeguasúvape ha mba'épa ojekuaa mitãnguéra rehe 33 (62%); nombohováiri mba'éichapa oñeñangareko tyeguasu aja, ñati'ũmondyiha jepuru ha/térã mba'asyrerojaha ñehundi. Ko mba'e ári oĩ hikuái ojepurúvo ao ñangarekohára ha ñati'ũmondyiha (100%); ogapy jeky'a'o (91%) ha jepytu'u (85%), sa saty'ãnga (100%) hemianduteĩ ñañeha'ãrõ/ñamombovy ñatu'ũ ha jahapejoko jekotu'i ñati'ũmondyuha rupive, ñahundipa ñati'ũreñoiha, jehchauka oñeñandu vove ha ikatuvérõ ani oje'únte pohã oimehaichagua. Mohu'ã: oikéva guive ko atýpe oikuaa ha hekokyre'ỹ porã ko tesãi rekópe, katu oikotevẽ hikuái atymbo'erã ñembohekopyahu ñeñangarekogua.

Ñe'e yta: kuaapy – tekoite – zika – ñati'ũmondyuha jepuru – oporomomembýva mba'apoharaite.

Introduction

Zika is an arbovirosis associated with severe sequelae such as congenital brain anomalies (Nunez, Vazquez, Beltran, & Padgett, 2016) or Guillain Barré syndrome (Cao-Lormeau, et al., 2016). It is a prevalent disease, which preferentially affects the pregnant population and the newborn, in the latter presents microcephaly, malformations of the central nervous system, low birth weight among others; being the main preventive measure the eradication of vectors, the main transmitter, for this public health actions are required at the community level, mainly.

Zika virus is transmitted to people mainly through the bite of an infected mosquito of the Aedes species (Aedes aegypti and Aedes albopictus), mosquitoes that spread the dengue and chikungunya viruses (United Nations Development Program., 2017). The disease is mainly characterized by the appearance of rash (mainly maculopapular and cephalo-caudal distribution), pruritus, non-purulent conjunctivitis, arthralgia, myalgia, periarticular edema and fever.

In many cases, the programs proposed by the governing body of the health sector (as prevention actions) promote the use of repellents, with the aim of eliminating insects, to control mosquitoes and prevent the transmission of the disease, such as dengue or Zika, considering that avoiding bites help prevent the transmission of dengue and other diseases transmitted by this carrier. (Pan American Health Organization, 2011).

Although other routes of transmission have been reported, such as blood transfusion, sexual transmission and fetal maternal transmission, which may vary depending on the gestational period in which the mother is at the time of infection, these have not yet been sufficiently documented.

It is estimated that the cost of the epidemic in Latin America, in three years, was $7 billion to $18 billion and that long-term costs will be associated with sequelae(Carabali, Austin , King, & Kaufman, 2018).

They have linked it to other serious health problems, such as eye problems, hearing loss, and seizures. Although the association between Zika virus and Guillain-Barré syndrome (GBS) (an immune system disease) is still under study, there are empirical studies that suggest that this virus causes damage to nerve cells, which causes muscle weakness and sometimes paralysis (Mateo, Cáceres, & Turpo, 2019).

Likewise, since its entry into the continent, a debate has been generated on reproductive rights versus the option of abortion, due to the potential sequelae in newborns. In Paraguay in December 2015, 6 cases were confirmed (Rios-González & Escobar-Salinas, 2016), however, according to WHO/PAHO data from October 2016, there were 557 suspected cases reported, of which 12 cases were laboratory confirmed (Pan American Health Organization/ World Health Organization, 2016).

According to the Ministry of Public Health and Social Welfare (MSPBS), cases of Zika infection were reported in Amambay, Paraguarí, Central, Asunción and Alto Paraná. Amambay being one of the departments where the first reports of infection were generated, specifically from the city of Pedro Juan Caballero, a border city with Brazil(Silva, et al., 2016).

Since the first cases, sustained transmission has been observed among cases in pregnant women and women of childbearing age (MEF) (Cabrera, 2019). The main response interventions of the programs developed against Zika focused on intensifying actions against the Aedes Aegypti vector (Ministry of Public Health and Social Welfare. AE-UFVE N° 005-2017, 2017), and also directed obstetrician-gynecologists to recommend women of childbearing age to delay pregnancy and use condoms, mainly as mechanisms to prevent its effects on newborns (Ministry of Health. AE-CDC-006-2017, 2017).

Considering that factors that could constitute barriers to Zika prevention persist, some research describes the lack of knowledge of its sexual transmission as an issue to be addressed among professionals (Heitzinger, Thoroughman, & Porter, 2018). The clinical manifestations of VZIK during gestation appear to be similar to those in non-pregnant women. In November 2015, the Brazilian Ministry of Health recognized the association between the increased prevalence of microcephaly with Zika virus infection during pregnancy. Where since the beginning of the investigation (October 2015) and up to January 13, 2016, 3,530 suspected cases of microcephaly have been reported in newborns in 724 municipalities in 21 Brazilian states. The newborns have not only presented microcephaly; other congenital malformations such as intracerebral calcifications and severe macular atrophy have also been observed(Gautre & Simon, 2019).

Guillain Barré syndrome (GBS) associated with VZIK was described in French Polynesia in 2013 and more recently in Brazil. In French Polynesia, since the beginning of the ZIKAV epidemic, approximately 8,200 cases of infection have occurred and were recorded in a population of 268,000 people. The incidence of GBS increased 20-fold, raising the hypothesis of a potential causal involvement. For every 100,000 cases of Zika, ĩ 5001,000 cases of Guillan Barre would be expected (3.512% lethality during the acute phase). In Venezuela, several cases possibly associated with ZIKV are currently under investigation. There are an estimated 200 cases to date. The average number of GBS cases expected in Venezuela would be 150300 x year, or 12,525 x month. The current estimated rate of GBS associated with Zika in Venezuela: 2 x 10,000 cases (Pan American Health Organization, 2015).

Prevention basically consists of vector elimination, and protection of those susceptible to Aedes bites, vaccine development takes time and is not a current solution.

Each adult female Aedes can deposit about 100 eggs in water, which generate larvae and pupae. The mosquito usually lives within a radius of 100 meters from its breeding site. The peak biting time of mosquitoes is during hours of low sunlight intensity; in general, it starts at dawn (6:00 to 8:00 hrs) or before dusk (17:00 to 19:00 hrs).(Sharma, et al., 2018).

Aedes aegypti in natural conditions survives an average of 15 to 30 days. The egg-laying interval is approximately every three days. Its feeding can be done at any time (it can bite people in a house several times to complete the blood meal necessary to ensure the fertility of the eggs).(Zamora, Taminche, & Salazar, 2017).

In Paraguay, the MSPBS states in its publications that "mosquito nets and repellents, two allies against Zika, Dengue and Chikungunya", explaining that the repellent is indicated for use only outdoors, because it is a toxic product, its use should be done with caution, especially in environments where pregnant women and children under 2 months are found.(Ministerio de Salud Publica y Bienestar Social, 2024).

It is important that obstetricians explain to users, to ensure protection against mosquitoes, that the repellent should contain 20% DEET and not exceed 30% of this concentration, and that its application should be performed on average every 3 to 6 hours to ensure health care.

Faced with this type of proposed actions, it is key to determine the knowledge and attitudes of obstetric

professionals in order to identify whether the recommendations promoted by the governing body were understood, accepted and practiced by these professionals, in order to allow rethinking evidence-based prevention strategies, considering that the quality of life of the mother and her newborn depend on them.

The present study aims to recognize the knowledge and attitudes of obstetric professionals about Zika for care during pregnancy, in the period 2024.

Methodological aspects

An observational, descriptive, convenience sampling study of consecutive cases was carried out, surveying obstetrics professionals from the different referral hospitals of San Lorenzo - central department.

The study was carried out from July to September 2024, on a probable universe of 76 professionals corresponding to different cohorts until 2022, selected through simple random sampling. Sample: 53 (70%)

The inclusion criteria to be part of the research were: obstetrics professionals, graduates of the UNA, until the 2022 cohort, voluntary participation.

A questionnaire developed from the PAHO/WHO integrated epidemiological surveillance system model for dengue, chikungunya and zika was applied, previously validated by experts in the area, a pilot validation plan was applied, the questions were presented in google forms format, with closed answer options, self-application, with prior informed consent.

The data collected from the questionnaire were tabulated in Excel for analysis and interpretation.

The following basic ethical principles were practiced in this work: respect for people, beneficence and justice.

Results and Discussion

Of the probable universe of 76 (100%) professionals, a total of 53 (70%) obstetricians responded voluntarily during the period from July to September 2024.

Regarding the knowledge of obstetricians about Zika, it can be seen that according to the indicators in Figure 1, of the 7 questions posed, the following have been answered correctly: they know the concepts 53 (100%), the symptoms presented by a patient 49 (92%) and the method of diagnosis 53 (100%).

Regarding the other knowledge indicators, the answers were mostly incorrect: 35 (66%) did not know how long the symptoms last; 33 (62%) did not know how the Zika virus affects pregnant women; how children are born with Zika and what care the obstetrician should recommend to the mother during pregnancy to avoid the disease and how to use repellents to combat the transmitting mosquito.

Zika is an emerging disease due to the fact that after the appearance of the first cases detected in the 1970s, a rapid spread began in countries of the Americas.

In Brazil, the first 16 confirmed cases were reported in 2015, these occurred in the states of Bahia and Rio Grande do Norte; concern about this disease grew when pregnant cases emerged, causing children with microcephaly and disability(Maguiña Vargas, 2016).

The confirmation of severe cases in pregnant women led the World Health Organization (WHO) to declare that the Zika virus represented a public health emergency (World Health Organization,

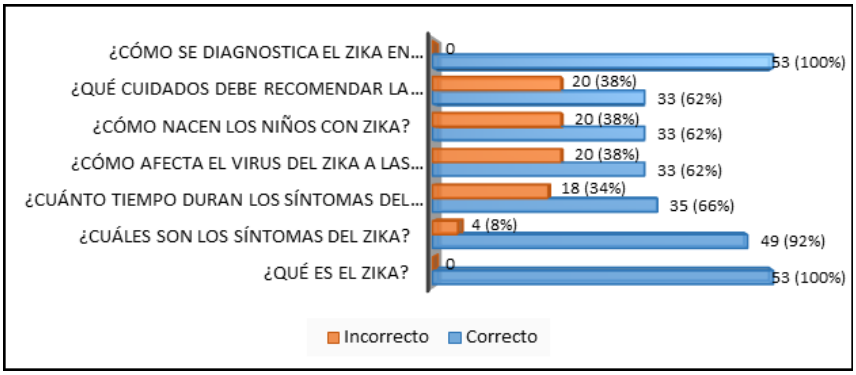

Figure 1. Zika knowledge of obstetric professionals. San Lorenzo, 2024. N=53

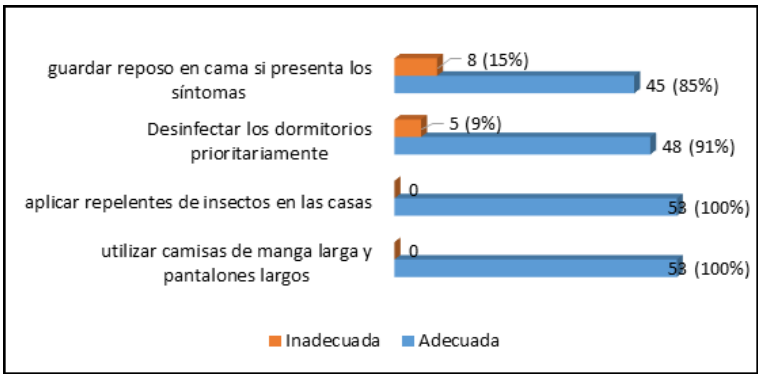

Figure 2. Attitude of Obstetric professionals to prevent the spread of Zika. San Lorenzo, 2024. N=53

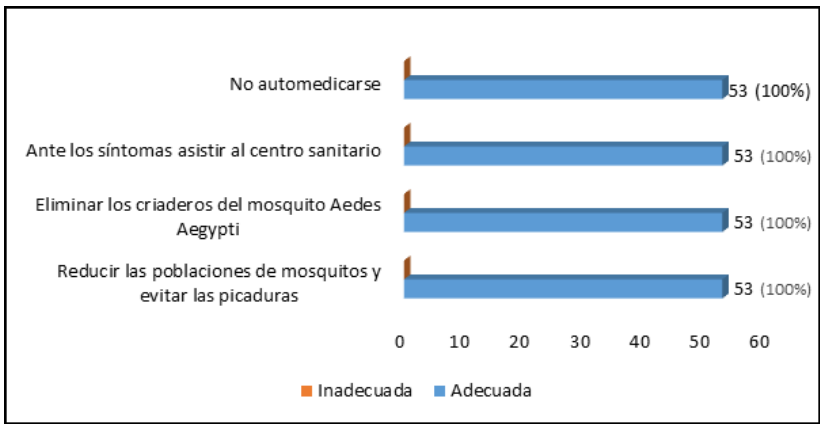

Figure 3. Attitude of Obstetric professionals to prevent the spread of Zika. San Lorenzo, 2024. N=53

2018); due to the serious consequences observed in the increase of neurological disorders and neonatal malformations associated with this virus, which circulates mainly in Africa, but also in America and Asia, making it a pandemic.

It is important to remember that symptoms last from several days to a week, a factor that has a negative impact on preventive actions when the transmitting mosquito and the patient are present. In addition, Zika virus infection during pregnancy can cause severe birth defects in the newborn, and is associated with other problems during pregnancy. (Maguiña Vargas, 2016).

To ensure protection, in addition to measures related to destroying breeding sites, preventing the accumulation of water that will not be used, eliminating unused containers and objects that can accumulate water, keeping the water to be used covered, among others; the MSP recommends the use of repellents, also warning that these are toxic because they contain DEET as the main component. In addition, the use of mosquito nets and screens on doors and windows is recommended; in the case of pregnant women and children under 2 months of age, use repellent coils and tablets sparingly. (Ministry of Public Health and Social Welfare, 2024).

Among the factors that could constitute barriers for the prevention of Zika, some investigations refer that the lack of knowledge of the transmission mechanism through sexual transmission in addition to that generated by the mosquito bite does not help to improve health indicators.(Villamil-Gomez, Gonzalez-Camargo, Rodriguez-Ayubi, Zapata-Serpa, & Rodriguez-Morales, 2015).

Health promotion for the control and reduction of cases of patients with Zika viral disease varies according to the etiology and epidemiological conditions, since there are services where there are no resources (equipment or supplies) to perform laboratory tests to facilitate prevention and health promotion actions. It is necessary for the governing body to establish protocols and health education programs that guarantee the acquisition of competencies on the part of professionals and thus provide actions that favor the quality of life of the entire population (Castellanos, 2016).

The intervention mechanism proposed in public health by the WHO (Pan American Health Organization, 2011) to prevent the increase in cases and their serious consequences in children is based primarily on actions to combat the proliferation of the transmitting agent and the monitoring of preventive actions to improve the health status of the population after the presence of the Zika viral disease, which refers to promoting health actions that contribute to improving attitudes, knowledge and healthy practices in the community with advice from health professionals.

Figure 2 refers to the appropriate attitude of the professional to prevent the spread of Zika, very encouraging values can be observed, considering that he/she is willing to comply with the actions that prevent contagion, such as: use protective clothing and repellents (100%); disinfect your home (91%) and rest in case of symptoms (85%).

It is important that the obstetrician is empowered with the mechanisms of prevention of this disease, especially considering that Zika virus infection during pregnancy can cause severe birth defects in the product of conception and also because it is associated with other problems during pregnancy. (Pan American Health Organization, 2011).

The acquisition of a good professional attitude cooperates effectively to the establishment of health prevention policies and programs; because this disease is generated through the mosquito bite, which does not discriminate against pregnant women, who in turn can affect the health of the fetus. (Castañeda, Segura, & Ramírez, 2019).

There are several promotional actions on the Zika viral disease that can be addressed from professional care through education, considering that in our environment the transmitting mosquito persists, in order to address the latent epidemiological situation, among which we can highlight:(Maguiña Vargas, 2016)

- Design control strategies and vector control with the reinforcement of activities related to the integrated management program of vector-borne diseases with the participation of the population in the work of eliminating mosquitoes and their breeding sites.

- To conceive what is related to the Zika viral disease in each educational activity, form of teaching organization and health promotion activities. Profundizar en el conocimiento y enseñanza sobre la situación epidemiológica actual relacionado con el Zika a través de cursos, eventos, talleres y entrenamientos dirigidos a sectores e instituciones vulnerables, propiciara mejores expectativas en la salud de la población, y también de las madres embarazadas y sus niños.

In Figure 3, regarding the attitude of the Obstetric professional about sanitary measures to be taken to avoid Zika infection, 100% of those consulted agree that the following should be done: reduce mosquito populations and avoid mosquito bites by applying repellents in open environments, considering the toxicity of the products. Eliminate Aedes Aegypti mosquito breeding sites. In case of symptoms, go to a health center and, of course, do not self-medicate.

The attitude of the professionals includes assuming a didactic role of guidance on how to avoid diseases, in this case Zika, providing information to patients and ensuring that they understand the risks of the disease, mainly for the unborn child. (Hernandez, 2015).

The promotion of preventive actions to contain the Zika viral disease is based on lifestyle changes, participatory and intersectoral actions of community members, from joint and coordinated work, where the obstetrician, has a key role to achieve adherence in the fight to eliminate the vector from education during consultations.

The development of health promotion activities, with the interaction generated in these consultations, enables community participation in self-care, and in the control and eradication of the Aedes mosquito, which causes viral diseases (Zika, Dengue, Chikungunya, Yellow Fever) of high risk for pregnant women.

Conclusions and suggestions

It can be concluded that obstetric professionals have knowledge and attitudes that favor sanitary actions for the prevention of Zika disease and with respect to the use of repellents, how to use them appropriately to combat the transmitting vector considering its toxic component, in the period 2024.

As suggestions, professionals should develop training activities on this pathology oriented to improve professional skills on some specific aspects to prevent this disease, and avoid serious complications in the newborn generated by this arbovirosis, so that obstetricians propose actions that allow to make effective in prevention actions such knowledge and attitudes, which allow to promote healthy habits in pregnant women and their environment.

In addition, it is considered absolutely essential to generate behavioral changes and adherence to the programs promoted by health facilities through preventive actions, such as the use of repellents and appropriate clothing to avoid mosquito bites; proper disposal of waste commonly used in walks, such as food holders, glasses or bottles, because they are potential breeding sites of the mosquito, in order to prevent infection in pregnant women, mainly due to

the risk of microcephaly in newborns.

Acknowledgments

To the obstetricians, for their performance during the development of the survey application work.

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