DENGUE AND RESOLVING CAPACITY IN TWO HEALTH REGION IN PERU

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ABSTRACT

The objective of this research was to determine the relationship between the management of dengue and the resolving capacity in the Health Macro Region MINSA La Libertad - San Martín, 2018. The correlational descriptive research was based on the application of the multidimensional questionnaire CAMDECRI, the total population was 373 professional care workers of I, II and III level of care, 266 in the La Libertad Region and 107 in the San Martín Region. The results showed that Dengue Management is Regular at all three levels of care (with 73.2%, 51.1% and 71.6% respectively) with significant variation (F = 4.177 and a p< 0.05). The Resolving Capacity is Regular in the three levels of care (with 57.4%, 44.3% and 59.8% respectively) without significant variation (F = 2.348 and a p> 0.05). It was evidenced that there is a significant relationship between the management of dengue at the general level and the resolving capacity at the three levels of care, the organization and the responsibility inherent in said capacity.

Keywords: Dengue management, resilience.

I. INTRODUCTION

Dengue occurs with or without warning signs or in a serious form, having increased by 30 thousand times its incidence since its appearance covering more and more unaffected areas. That is, every year hundreds of thousands of cases of severe dengue arise, with approximately 20 thousand deaths (1). The world loses 264 lives a year for every one million inhabitants. It is estimated that for each outpatient and hospital case the costs range from 514 to 1994, US dollars, mostly affecting the poorest population. Generally, the actual numbers are higher due to sub-registries and the erroneous justification of dengue cases (2). In Latin America, the annual cost of dengue has been estimated at $2 trillion, of which 60% corresponds to indirect costs, mainly in the loss of productivity. The pattern is similar to those reported 30 years ago in Asia (2). According to PAHO/WHO, cases increased fivefold between 2003-13. Cases were reported annually, on average more than one million cases and in 2013 is reported as the continent's most epidemic year with more than 3 million cases, 37,705 severe cases and 1,289 deaths (3).

Peru presents risk factors such as water supply and inadequate storage, city management, cleanliness conditions, which favored the most important epidemic outbreaks in the last 5 years. The most affected city was Iquitos (2011), followed by Pucallpa (2012), advancing radically towards the regions of San Martín and La Libertad where they have had to resort to international help from WHO/PAHO to alleviate the outbreaks and development of the epidemic (4). As of 2016, 22,009 cases of dengue were recorded, the highest number reported in 2015 by PAHO. It should be noted that 37.5% of cases were in adults aged 30-59 years, while 25% were cases in young adults aged 18-29 years (4). Likewise; during the first months of 2017, 25 deaths were recorded nationwide. According to MINSA the most affected departments are: La Libertad, Piura, Ayacucho, Lambayeque and Loreto (5).

Mosquitoes transmitting dengue were detected in areas where they did not previously occur and this has led to the appearance of autochthonous cases of dengue in areas such as Lima and Ica. Dengue has become a public health
problem with the greatest global and national increase (4). This is aggravated by constantly questioning the resolving capacity of health institutions to deal with cases, mainly their organizational aspects, methods and work styles, and their responsibility to deal with the epidemic (6). The institutions providing health services in the Region la Libertad and San Martín are part of the national health system and have been the most affected by the dengue epidemic along with Piura and Loreto, the increases in cases in the last 3 years have been higher than the national average by more than 15%, and the cases of dengue "not attended" or "very neglected" have exceeded the national averages by more than 20% (7). The perception of health personnel in this regard is basic and avoids assuming responsibilities by pointing out as original sources of the problem to poor working conditions or lack of budgets and, avoid commenting on it. As a result, the investigation was guided by the following. The objective of this research was to determine the relationship between the management of dengue and the resolving capacity in the Health Macro Region MINSA La Libertad-San Martin, 2018.

II. MATERIAL Y METHODS

The research was non-experimental descriptive cross-sectional correlation. The population was made up of 373 healthcare professionals assigned to attend to dengue cases in the different health facilities of the Macro Region La Libertad - San Martin, 2017-2018. The multidimensional questionnaire CANDECRI validated by experts with a high level of agreement and pilot study with high coefficients of Crombach's Alpha (between 0.875 and 0.928) was applied. The data were entered into the computer with the help of the STATISTICAL PACKAGE SPSS V22 in Spanish where the information was analyzed according to the requirements of the objectives of the study and the verification of the initial research hypothesis. Pearson's correlation test with a significance considered at 5% and the F-test of variability were used to determine the correlation.

III. RESULTS

Table 1 The management of dengue according to levels of care in the Macro Health Region MINSA La Libertad-San Martin, 2018.

<table>
<thead>
<tr>
<th>DENGUE MANAGEMENT</th>
<th>LEVELS OF CARE</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Level I Nº %</td>
</tr>
<tr>
<td>Bad</td>
<td>17 9,3</td>
</tr>
<tr>
<td>Regular</td>
<td>134 73,2</td>
</tr>
<tr>
<td>Good</td>
<td>32 17,5</td>
</tr>
<tr>
<td>Total</td>
<td>183 100,0</td>
</tr>
</tbody>
</table>

Table 1 shows that the dengue management according to levels of care in the Health Macro Region MINSA La Libertad-San Martin during the year 2018 obtaining mostly regular levels at the three levels of care, being its level of variability significant. The dengue management in the three levels of care can be considered similar to those reported by Ortiz in Nicaragua (2015) and Pavón in Nicaragua (2012), where it is evident that the processes of dengue management need to be improved or rethought in search of greater effectiveness and efficiency. Apparently, we made very little progress in the implementation of health strategies and in compliance with the policy guidelines of the sector as well as in the transformation of public health in our country. We are able to identify problems, but not to solve them comprehensively. In any case, we must look closely at the postulates of the new public health and its way of including strategies for providing health services that can really be put into practice and that are not only very reasonable and coherent theoretical statements, but, empty in terms of systemic implementation.

Table 2. The resolution capacity for dengue care according to levels of care in the Health Macro Region MINSA La Libertad-San Martin, 2018.
Table 2 shows that the resolution rate for the dengue management according to levels of care in the Health Macro Region MINSA La Libertad-San Martin during the year 2018 is mostly regular at the three levels of care, being its level of variability not significant. The dengue management at all three levels of care can be considered. The dengue management at the three levels of care can with respect to resolving capacity can be considered similar to those reported by Ávila in Colombia (2016), López, in Cuba (2014), Mendoza in Huancavelica-Peru (2016) and Origuela in Ayacucho-Peru (2012), obtaining results that show similarities of the resolving capacity at the three levels of attention in the Macro Region La Libertad-San Martin. The most representative indicator of this valuation criterion is the idea that is used to measure the resolving capacity as an efficiency of the health work, this being not a valuation form of the procedural, but a quantitative result of compliance with goals.

Table 3:

<table>
<thead>
<tr>
<th>OBJECTIVE</th>
<th>LEVEL OF ATTENTION</th>
<th>DENGUE MANAGEMENT</th>
<th>BAD</th>
<th>REGULAR</th>
<th>GOOD</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>BAD</td>
<td>27</td>
<td>14,8</td>
<td>12</td>
<td>13,6</td>
<td>07</td>
<td>6,9</td>
</tr>
<tr>
<td>Regular</td>
<td>105</td>
<td>57,4</td>
<td>39</td>
<td>44,3</td>
<td>61</td>
<td>59,8</td>
</tr>
<tr>
<td>Good</td>
<td>51</td>
<td>27,9</td>
<td>37</td>
<td>42,0</td>
<td>34</td>
<td>33,3</td>
</tr>
<tr>
<td>Total</td>
<td>183</td>
<td>100,0</td>
<td>88</td>
<td>100,0</td>
<td>102</td>
<td>100,0</td>
</tr>
</tbody>
</table>

Table 3: Determine the general relationship between dengue management and resolving capacity according to levels of care in the Macro Region of health MINSA La Libertad-San Martin, 2018.

Table 3 shows that the general relationship between dengue management with the resolving capacity according to levels of care in the Macro Health Region MINSA La Libertad-San Martin, 2018, obtaining that in the three levels of care are shown significant correlations between the dengue management and the resolving capacity, being the intensity of the correlations moderate in levels I and II as at the general level. Regarding the correlation between the dengue management and the resolving capacity of MINSA health facilities at a general level and at its three levels of care, they are considered similar to those reported by Calderón and Lujan (2017) due to the way in which mass communication strategies are included, intersectoral awareness, strengthening organizational networks, strengthening surveillance and monitoring systems, developing capacities to reduce infestation rates through various activities, such as in the timely and adequate management of solid and unusable waste, fumigation and promoting health education.

Table 4: Determine the relationship between dengue management and the organization inherent in the resolution capacity according to levels of care in the MINSA La Libertad-San Martin Macro Health Region, 2018.
Table 4 shows the relationship between dengue management with the organization inherent in the resolving capacity according to levels of care in the Health Macro Region MINSA La Libertad-San Martín, 2018, obtaining that the intensity of the correlations is moderate at levels I, II and III, as at the general level. With regard to the moderate correlation between the dengue management with the organization inherent in the resolving capacity of the establishments in levels I, II and III of care as at the general level, no similar studies have been found, however, they can be explained according to the characteristics of the management of human capital, including the level of knowledge of the personnel for the care of dengue and the ways in which the care processes are conducted. The organizational processes related to the management of an epidemic such as dengue depend on the way in which institutional learning is conducted and which is then part of its organizational culture.

Table 5: Determine the relationship between dengue management and the responsibility inherent in the resolution capacity according to the levels of care in health facilities in the La Libertad-San Martin Macro Region, 2018.
Table 5 shows the relationship between dengue management with the responsibility inherent in the resolving capacity according to levels of care of the health facilities in the Macro Health Region MINSA La Libertad-San Martín, 2018, obtaining that the dengue management at the three levels of care are correlated with the responsibility inherent in the capacity. The intensity of the correlations is moderate in levels I, II and at the general level. With regard to the moderate correlation between the dengue management fever and the responsibility inherent in the resolving capacity of the health facilities of the MINSA, in the Macro Region la Libertad San Martín, in its three levels of care, can be explained from the approach given by the World Health Organization (WHO) to the issue of responsibility within the framework of the resolving capacity of health institutions, where it is based on the obligation of health institutions to direct educational activities, research and service to the priority needs of the community, region and nation.

IV. CONCLUSIONS

Dengue management is regular at all three levels of care in the MINSA La Libertad-San Martín Macro Health Region, with its variation being statistically significant. There is a significant relationship between dengue management and general resolving capacity at a general level at the three levels of care, there is a significant relationship between dengue management and the organization inherent in resolving capacity at all three levels of care, and there is a significant relationship between dengue management with the responsibility inherent to the resolving capacity in the three levels of care in the Health Macro Region MINSA La Libertad-San Martín in all cases.

BIBLIOGRAPHICAL REFERENCES