



An Investigation of the Prevalence of Dermatological Conditions in Rural Honduras

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Background

Honduras, located in tropical Central America, faces notable health challenges. One example includes skin diseases, which are prevalent due to the warm and humid environment which facilitates the growth and spread of microorganisms causing infections and other skin conditions (6). Researching the prevalence of dermatological diseases in Honduras, specifically the rural communities such as Gracias a Dios, is beneficial for the prevention and progression of improving the quality of life of the individuals from those communities. Our research study examined the prevalence of skin conditions such as atopic dermatitis (AD), a chronic skin condition distinguished by dry, itchy, and scaly skin, psoriasis, and fungal infections that can be caused by a wide range of environmental and lifestyle factors (6).

From our literature review and the administration of IRB-approved surveys, we were able to discover the prevalence of AD among the villagers in the rural community of Gracias a Dios. Based on our preliminary observations, it showed that Honduras has a high prevalence rate of pediatric AD. Our future projects will continue our research efforts, as well as allocate resources, enhance efforts to identify risk factors, target prevention strategies aimed at minimizing the spread among certain populations, and reveal distribution patterns in disparities in access to healthcare services (5). Not only does understanding the prevalence and severity of dermatological diseases act as a catalyst for the implementation of early diagnosis and treatment, but it also improves knowledge of and access to prevention strategies and practices.

Purpose

Our research investigation aimed to analyze both the existing literature and newly gathered data to assess the prevalence of dermatological conditions in Honduras. As access to high-quality healthcare may be limited for these individuals, understanding these topics through research and education will help improve the health outcomes of the individuals in these communities.

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Methodology

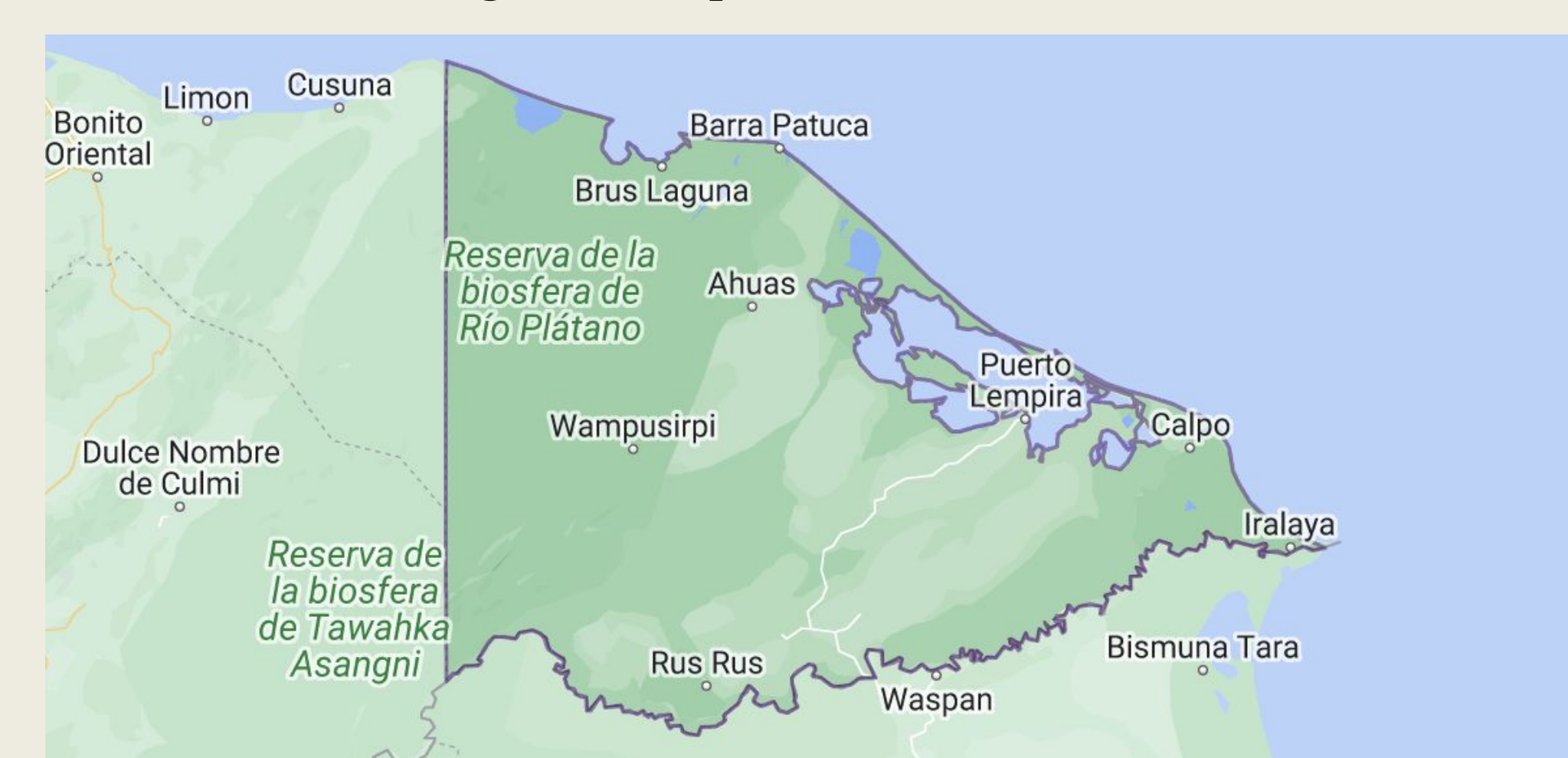
Literature Review: A literature search was conducted, and articles on dermatological diseases in Latin America were found. Specifically, we searched for research findings in countries like Honduras and in rural areas like Gracias a Dios. The articles were analyzed, and the information obtained contributed to understanding factors that influence certain diseases, such as atopic dermatitis, in a given population.

IRB-approved Surveys: Surveys were utilized to gather data from participants in Honduras with the aim of determining the prevalence and severity of certain dermatological diseases. These surveys were designed to collect information on the presence of skin conditions of individual and lifestyle characteristics that may determine risk factors (6). The study team worked with local healthcare providers in Honduras, with the surveys administered in local dialects in addition to English. Participants were given the option to decline or withdraw from the study at any time. Statistical techniques were used to identify associations between the presence of skin diseases and risk factor variables. The results were then analyzed to identify disparities in the provision of dermatological services, with the goal of developing interventions to improve access to care (5).

Figure 1: Map of Honduras



Figure 2: Map of Gracias a Dios



Results

- Based on the preliminary data collected from our surveys, it was concluded that the polled participants in Gracias a Dios suffered from a range of dermatological conditions when completing the survey. The findings suggest AD or AD-like symptoms affected a portion of the local population, and further investigations may be warranted to determine the scope of health concern and prevalence (4).

Prevalence of Dermatological Conditions in Gracias a Dios, Honduras

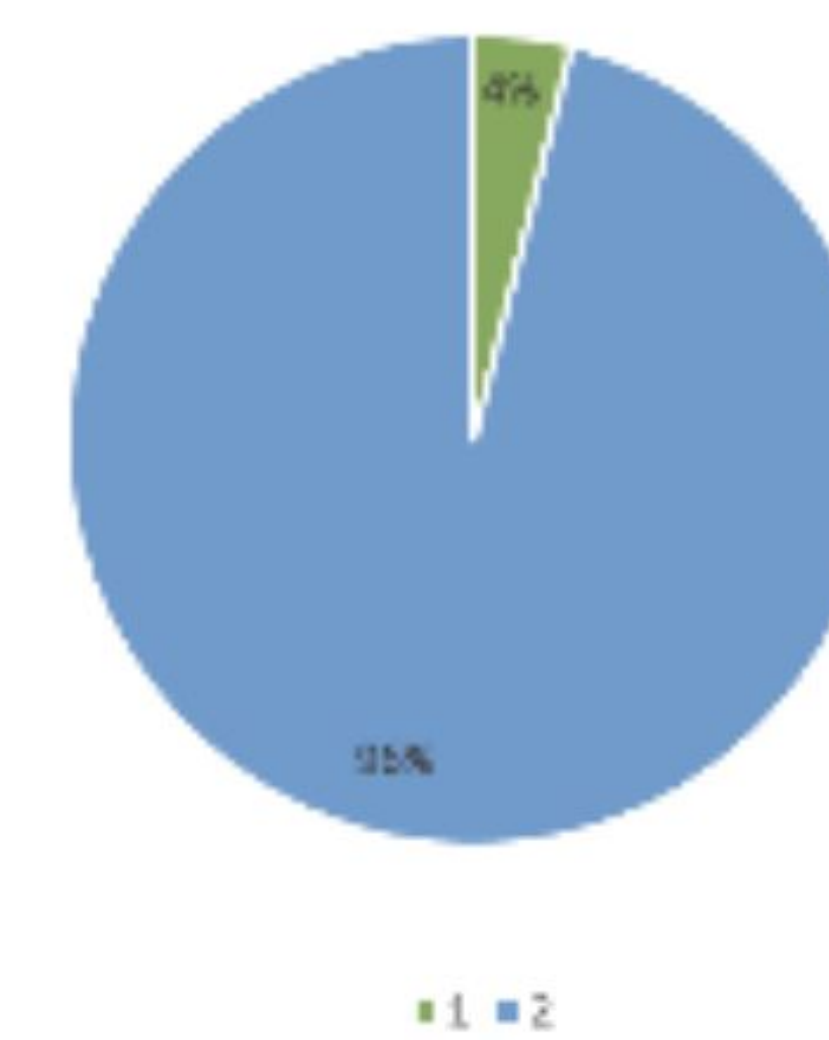


Figure 3: Data is based on the number of polled individuals that were affected by a dermatologic condition at the time of survey administration. 4/99 responded "yes (1)" while 95/99 responded "no (2)."

- Through a systematic review, 19 articles were the focus of 170 identified from 13 different databases where information on the year of publication, country of origin, and population specifics were studied. Studies dated between 2009-2022 were included (2,3,4). The literature review revealed that children aged 6-7 and 13-14 years experienced a relatively high prevalence of AD symptoms.

	Age Group	
	6-7 years	13-14 years
Total n	385,853	663,256
Centers	143	230
Total Number of Countries	60	96
Current Symptoms (%)	0.9-22.5	0.2-24.6
Current Severe Symptoms (%)	0.0-4.9	0.0-5.8
Lifetime Occurrence (%)	1.2-38.6	0.8-48.3
Prevalence in Honduras (%)	15.9	15.6
Prevalence in Honduras Rank	8th	11th

Figure 4: Honduras data in comparison to other countries in the study performed in 2009

Discussion

Preliminary data from surveys provided insights on health status and needs of the local population in Gracias a Dios, where incidence of AD in low-income countries is high, affecting up to 20% of children and 3% of adults (1,4).

The literature review found a concerning pattern of high prevalence of AD symptoms among children aged 6-7 and 13-14 in Honduras, with severe symptoms being more common, highlighting the urgent need for better preventive measures (2,4).

To improve overall health outcomes of Honduran community, further investigation is needed to determine distribution of AD and other dermatological diseases in the region, investment in research on this topic and addressing health equity gaps, and improving access to medical care.

Conclusion

Our studies of the Honduran community of Gracias a Dios suggest dermatological conditions are a concern for these individuals. Studies have noted atopic dermatitis is prevalent and severe among both children and adults in Honduras, making early detection and intervention critical for successful treatment. Atopic dermatitis can significantly impact individuals' physical, mental, and emotional health, leading to challenges in daily life and potentially worsening health over time.

Moreover, the healthcare disparities and multifaceted issues facing rural communities highlight the need for continued research on the Honduran population to improve their health outcomes (5). Working in rural environments requires us to innovate and find alternative ways to deliver patient care in the absence of the same resources as those available in developed countries like the U.S. Providing healthcare in these communities demands special care and attention, which underscores the importance of designing effective and efficient healthcare systems for marginalized communities.

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