Experience report

Exploring the socioeconomic and dietary reality in disadvantaged communities: experience report

Explorando a realidade socioeconômica e alimentar em comunidades desfavorecidas: relato de experiência

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ABSTRACT | INTRODUCTION: The urban concentration of medical schools limits students' exposure to rural challenges, hindering the implementation of guidelines aimed at humanizing professional education. Thus, there is a need for academic activities that address such demands, particularly regarding rural endemic diseases. **OBJECTIVES:** To report the experience of medical students with home clinical visits to families in socioeconomically disadvantaged conditions in the municipality of São Benedito do Sul, PE. **METHODOLOGY:** Resources obtained from food sales and donations from Procape/UPE resident doctors covered the transportation and accommodation of twelve students and a supervisor. With the assistance of a local Community Health Agent, five families were selected. Forms were applied to collect complaints related to any diseases, dietary content, and housing conditions, in addition to performing physical examination and an electrocardiogram. **RESULTS:** There was significant precariousness regarding housing and access to healthcare. The total income was on average less than the minimum wage, while education ranged from illiteracy to incomplete elementary education. The households lacked access to showers or toilets. Corn-derived products with processed meat were the staple food, with sporadic consumption of beans, chicken, or eggs. Numerous reports were recorded regarding the precarious state of free healthcare assistance. **CONCLUSION:** The project experience was crucial in constructing a critical understanding of the expanded concept of health. It was evident that the Sistema Único de Saúde (SUS) does not fully meet the region's demands. A reassessment of the quality of local medical care is necessary to meet the residents' needs.

KEYWORDS: Medical Education. Social Vulnerability. Human Right to Adequate Food.

RESUMO | INTRODUÇÃO: A concentração urbana das faculdades médicas limita a exposição dos estudantes aos desafios rurais, dificultando a implementação das diretrizes que visam humanizar a formação profissional. Surge, então, a necessidade de atividades acadêmicas que abordem tais demandas, principalmente sobre as endemias rurais. **OBJETIVOS:** Relatar a experiência de estudantes de medicina com visitas clínicas domiciliares a famílias em condições socioeconômicas desfavoráveis no município de São Benedito do Sul, PE. **METODOLOGIA:** Os recursos obtidos pela venda de alimentos e doados por residentes do Procape/UPE custeou deslocamento e estadia de doze estudantes e orientadora. Com auxílio da Agente Comunitária de Saúde local, cinco famílias foram selecionadas. Aplicou-se formulários para coleta de queixas ligadas a alguma doença, conteúdo da alimentação e condições de moradia, além da realização de exame físico e de um eletrocardiograma. **RESULTADOS:** Notou-se grande precariedade em relação às moradias e condições de acesso à saúde. A renda total era em média inferior a um salário mínimo, enquanto a educação variou do analfabetismo ao fundamental incompleto. Nas residências não havia acesso a chuveiro ou vaso sanitário. Derivados do milho acrescido de carne embutida eram a base alimentar, com consumo esporádico de feijão, galinha ou ovo. Registrado diversos relatos sobre a assistência à saúde gratuita em estado precário. **CONCLUSÃO:** A vivência do projeto foi fundamental na construção crítica do conceito ampliado de saúde. Evidenciou-se que o SUS não atinge completamente as demandas da região. Torna-se necessária uma reavaliação da qualidade da assistência médica local, para que possa suprir as necessidades dos moradores.

PALAVRAS-CHAVE: Educação Médica. Vulnerabilidade Social. Direito Humano à Alimentação Adequada.

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1. Introduction

The medical education model proposed by Brazil's National Curriculum Guidelines for Medicine, implemented in 2014, mandates a focus on preventive and social demands to understand the health-disease process.[1] The restructuring of the medical course aligns with the transformations the healthcare system has undergone in Brazil over the years. This alignment began in 1994, with the restructuring of Primary Care through the implementation of the Programa de Saúde da Família - PSF (Family Health Program), which was created to bring healthcare professionals closer to the community, shifting from a curative, disease-oriented healthcare system to a preventive one, aimed at health promotion.[2]

Following this update, students were introduced to a more practical experience of medicine through visits to primary care facilities in their cities. The transition from a "hospital-centered" model to a medical course that immerses students in the practical realities of Brazilian healthcare highlights efforts to make medical education more efficient and humane.[3] However, most Brazilian medical schools are located in either capitals or large urban centers[4], resulting in the limited exposure of students to the socioeconomic realities and issues affecting rural populations during their studies. Therefore, there is a notable need for experiences and scientific work aimed at understanding these populations' needs to foster a medical education that considers Brazil's socioeconomic and geographical realities.

Rural endemics, defined in Brazil as diseases caused by parasites or transmitted by vectors, continue to afflict the Brazilian population, particularly the impoverished families. Among the rural endemics in Brazil are yellow fever, schistosomiasis, leishmaniasis, filariasis, plague, Chagas disease, as well as trachoma, yaws, endemic goiter, and certain intestinal helminthiases, primarily hookworm infection. There has been a notable reduction in the incidence of Chagas disease (CD) due to improved housing conditions, vector control, identification of the acute phase of the disease, control of the transmitting insect, and the quality of transfused blood, as well as schistosomiasis, which has been controlled through improved basic sanitation and accessible treatment with medication in the most affected regions, breaking the transmission cycle of the disease. Despite this control, rural endemics still affect millions of Brazilians, and Mario de Andrade's 1928 quote remains relevant to Brazilian lives and medical care: "There are still so many diseases and insects left to care for in this grand country!".[1,3,5]

Therefore, in this distinctly Brazilian reality, Atenção Primária à Saúde - APS (Primary Health Care) emerges as a strategy for coordinating user assistance within the SUS, utilizing the principles of universality, comprehensiveness, and continuity to adequately reach the population.

Since 2020, municipalities have been required to offer the Programa Saúde na Hora (Health on Time Program), which mandates extended hours of operation for both Unidades Básicas de Saúde - UBS (Basic Health Units) and Unidades de Saúde da Família - USF (Family Health Units), allowing greater user access to services, increasing the coverage of the family health strategy, and reducing patient volume in Emergency Care Units. Thus, the composition of teams in both types of units was also established, with the UBS team being made up of a minimum a doctor and a nurse, while in the USF it is mandatory that the Family Health Team consists of a family doctor or general practitioner, nurse, nursing assistant, and Community Health Agents (ACS).[6]

Consequently, the scope of APS care encompasses health surveillance strategies such as epidemiological analyses, risk area assessments, vector control, immunization, and notification of compulsory notifiable diseases, as well as health promotion strategies through campaigns, patient counseling, and care strategies for various population groups, including children, women, adults, and the elderly.[7] Despite the significant advancements achieved by APS in recent decades, limitations in its ability to maintain patient follow-up and to refer more complex conditions to secondary and tertiary services still remain.[8]

In this context, the municipality of São Benedito do Sul, located in the Zona da Mata Sul of Pernambuco, was chosen for a practical experience involving clinical home visits due to its low human development index and the occurrence of rural endemics such as Chagas disease, schistosomiasis, and leishmaniasis.

In John Dewey's "Art as Experience," the concept of experience transcends mere passive observation to become a dynamic and enriching interaction. Dewey argues that experience is not just about appreciating the act itself, but about the process of engagement and reflection it triggers in the observer.[9] Thus, considering the context of Primary Care practice and the importance of experiential learning for individuals, this work aims to report the experience of medical visits to families living in unfavorable socioeconomic conditions, where the reality seen, heard, and felt is not part of the medical education curriculum, thereby seeking to redefine the physician's role within the Sistema Único de Saúde.

2. Methodology

For the execution of the project, the group raised funds through the sale of food on the campus of the University of Pernambuco (UPE), as well as donations from members of the resident staff at Procape/UPE. This fundraising helped cover part of the individual costs for the twelve students who participated in this project, making it possible to finance transportation and accommodation at a hotel in the municipality of São Benedito do Sul. The families were previously selected by a local community health agent as the most disadvantaged in the region, totaling ten, of which five were randomly chosen for a medical visit that would take place on a Saturday.

The information collecting forms included data on the number of inhabitants, number of beds, housing conditions, sanitation conditions, source of water in the house, presence of a shower, toilet or septic tank, access to electricity, internet, total family income, daily food intake including breakfast, lunch, and dinner, whether they cultivated food, if they owned a microwave, type of stove, poultry rearing, education level, weight, height, physical examination of systems, capillary blood glucose, and electrocardiogram (ECG). The ECG was included as a screening tool for Chagas cardiomyopathy, as the presence of electrocardiographic changes suggestive of Chagas disease can significantly impact the lives of those affected. Each family received a basic food basket and guidance on more appropriate nutrition for maintaining health, considering the income of the individuals involved.

As a result, a discussion was planned with the students involved in the project to evaluate the biopsychosocial and economic aspects of the individuals visited, in order to critically reflect on the human conditions that do not align with the basic rights upheld by the broad concept of health defined by the World Health Organization (WHO). From this experience, this record of the practice beyond the university campus was created with the aim of documenting how Brazil's public health system remains inadequate and inaccessible to a significant portion of the population, either due to the users' lack of knowledge or the lack of prioritization each issue demands.

3. Results and discussion

The project took place over the course of a day. Three of the five selected families were visited.

During the visits and following the interviews with the families, conducted in September 2022, a series of patterns regarding the socioeconomic situation of these individuals and their dietary routines became evident. The public neglect in truly supporting these family units and adhering to the principles of SUS was highlighted, as evidenced by several factors, such as: the inadequate monitoring of the individuals' health needs, the lack of proper housing infrastructure, the increasing deterioration of their diet quality, and the lack of reproductive planning, closely linked to limited access to health education.

One aspect to be considered is access to healthcare. The visited families lived in rural areas, far from any urban centers or local health units. As a result, monitoring these individuals is challenging, with long intervals between appointments, and their main reference for health-related matters was the ACS (Community Health Agent) who accompanied them. Secondary and tertiary care services are even further away, with individuals often needing to travel over long distances to Palmares (PE) or even further to the capital, Recife (PE). It was observed that the coordination between the local health network and more complex care services was minimal. When patients needed to rely on the regulation of referrals and exams, there was always a significant and unacceptable delay. Combined with the municipality's lack of resources, this further limited

effective communication with these specialized services. Consequently, individuals were often forced to turn to the private complementary health network, undergoing tests sometimes unnecessary or inadequately performed.

A positive aspect, highlighting the presence of SUS in these people's lives, was the implementation of the vaccination card, which was always enforced by the community health agent. Despite the geographical challenges, given that the visited area was located on a secluded hill from one of the municipal districts, there was ambulance coverage for emergency cases. However, all the families clearly stated that free healthcare assistance was inadequate and did not meet their needs. In addition to lacking a nearby emergency service, that overall meant that emergencies had to be taken care of on neighboring municipalities, the healthcare services at the local health post were reported as unsatisfactory and inattentively provided by the doctors. There was also a significant difficulty in conducting laboratory and imaging tests in the region. Faced with this situation, the local community attempts to overcome these obstacles and promote health among the residents through solidarity, in other words, through small financial contributions that collectively can cover the costs of necessary exams and better quality care in private institutions, as well as transportation for these patients.

This reality of precariousness became evident when listening to a report of an underdiagnosed nodule that appeared at a left breast, which the doctor refused to request a mammogram for. A year later, after another nodule appeared in the axilla on the same side, a left breast ultrasound was requested, followed by a mammogram and breast biopsy, both paid for by the 36-year-old patient, who had to raise money with the help of neighbors. The diagnosis of breast cancer was made, and the patient was referred for treatment in the capital of Pernambuco.

Additionally, conversations with the families revealed that many of them were prescribed medications with controversial and unnecessary benefits, considering their context, such as vitamin C and B complex, in populations where the main issue was food quality and a lack of awareness of their rights as citizens.

Despite the criticisms, the interviewees highlighted a predominantly positive aspect of the local healthcare system: the Community Health Agents (ACS). Even in precarious conditions, the local ACS was able to make home visits and be aware of the main health problems of the residents, play a crucial role in coordinating patient referrals to other more specialized centers, and contribute to health education, trying to encourage healthy practices and adherence to important public health aspects, such as vaccination.

All the families' total incomes were below the minimum wage, ranging from R$800.00 to R$1100.00, coming from government contributions and occasional work. Regarding housing conditions, two of the families lived in wattle and daub houses and one in a masonry house, all with electricity and broadband internet. However, none had a toilet or shower, and only one had a septic tank near the house. All used wood stoves for cooking, with one family alternating between a wood stove and a gas stove. The average number of rooms per household was four, all with two bedrooms, a kitchen, and a living room, without access to public transportation or a sewage network. Not all residents had their own beds, with several children sleeping in their parents' beds, revealing a significant disparity in the number of people living in each household: the first residence had nine inhabitants, while the second had only three. Regarding educational levels, all cases showed low levels, ranging from illiteracy to incomplete elementary education (3rd grade).

As for food, the predominant meals varied very little between households, with food made from corn flakes, called "quarenta," meaning corn couscous cooked with water and sometimes accompanied by “meat”: either bologna or sausage, both for breakfast and dinner. For lunch, the occasional consumption of rice with beans and chicken or sausage was reported. All the families interviewed reported not having the habit of buying fruits, despite stating there was no shortage of bananas in the region. The reasons given for this poor diet were varied, including the high cost of nutritionally better-quality foods, limited space on the land to grow their own food, and a lack of knowledge about the importance of good nutrition. For these reasons, families were advised to improve their nutrition by consuming foods which could be available on their land, such as vegetables and fruits,

although the difficulty of cultivation was clearly reported due to the competitive space between raising chickens and growing vegetables.

In the respective family units, the number of children ranged from four to seven. This large number of children also reflects the lack of reproductive planning and health education among these families, including a lack of guidance on the use of contraceptive methods, and also fear of using an intrauterine device or undergoing tubal ligation.

Finally, in the individual anamnesis conducted with the residents, only the mother of the first family visited reported complaints, mentioning dizziness and weakness due to lack of food, as well as pain below the breast after exertion, particularly when washing clothes. The physical examination revealed elevated blood pressure readings, with both measurements exceeding normal reference values (BP1: 158/94 mmHg; BP2: 154/98 mmHg), while capillary blood glucose levels were normal. No abnormalities were found in any of the ECGs performed.

Visiting the homes of families in São Benedito do Sul was a transformative experience. We were able to transcend what we learnt from books to the reality of the homes we entered. Medical skills were exercised through anamnesis and also through observation of the territory in which we were inserted, leading to clinical reasoning about potential pathogens in these families' lives.

In those humble houses, we found treasures in the form of affection and solidarity that transcended the lack of resources, exemplified by the exchange of fruits, animals, milk, and eggs among themselves without the need for money. Additionally, by discussing healthy eating, we provided knowledge that could positively impact these families' quality of life in the long term. Conducting exams such as ECGs is an additional care measure that demonstrates concern for the comprehensive health of these communities, promoting prevention and early diagnosis of potential heart problems. São Benedito do Sul not only opened the doors of its homes but also its hearts, leaving us with priceless lessons of humanity and compassion.

4. Conclusion

Reflecting on what is learned in college about the process of how an illness progresses, the role of high-quality free healthcare for everyone, and the value of a clinical examination focused on personalized listening and a good physical exam revealed an unprecedented degree of disconnection, now felt, observed, and recorded. Despite the availability of an ambulance for emergencies, the costs necessary to access quality healthcare, as reported by the families, highlight the contrast between the services offered in large urban centers and those in the rural areas of Brazil.

Additionally, the limited time available for action and the small reach of our intervention, given that only three of the five selected families were visited, are some of the limitations of this work. Moreover, some individuals from the family units refused to participate in the interview, and the geographical barriers to accessing the residences caused delays and difficulties in contacting the families.

The sentiment of needing to reassess the excess of tests requested in the SUS was evident during the experience, clearly observed in basic health units and tertiary care. This action can reallocate costs to those who truly need care and ensure health as a whole, starting from promoting a more dignified life regarding dietary and educational processes. Perhaps this model of experience should extend beyond an extension project and should be promoted and strengthened by medical schools in Brazil, showing future SUS doctors a reality very different from what is taught.

Finally, it was perceived that there is a gap between the health promotion described in Brazil's Organic Health Law (Law No. 8080/1990) and the quality of medical care that is not tailored to the local reality.[10] Therefore, the experiences lived teach a lesson of the value of guidance derived from a good clinical examination, coupled with the importance of holding the public authorities accountable for improving living conditions and implementing quality public health policies aimed at the population, which have the potential to save lives. These factors are essential for true promotion and assurance of health in its broad concept as defended by the WHO.

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Authors' Contributions

Barros MNDS participated as the project supervisor, assisting in the conception of the activity and guiding the students during the collection, analysis, and interpretation of both objective and subjective data of the work, as well as in the review of the written article and approval of its final version. Cardoso VCG and Leite JGA participated in data collection and interpretation, methodological design, data interpretation, and article writing. de Carli RC and Farias SCL participated in data collection and interpretation and article writing. All authors reviewed and approved the final version and agree with its publication.

Conflicts of Interest

No financial, legal, or political conflicts involving third parties (government, companies, and private foundations, etc.) were declared for any aspect of the submitted work (including, but not limited to, grants and funding, participation in an advisory board, study design, manuscript preparation, statistical analysis etc.).

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