



## Oral Health Care and Multidisciplinary Knowledge at the Volunteering Work in Peru: an Experience Report.

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### EXPERIENCE REPORT

#### ABSTRACT

People in lower-income societies are facing significant challenges in accessing primary oral health care during their entire lives. Nongovernmental organizations (NGOs) have facilitated the provision of dental services by outreach program volunteers to low-and middle-income countries. Volunteering programs worldwide create a positive new experience between the students and professionals who are able, available, and with the initiative to help others, their objective primarily is to give some relief to those involved in the approximately more than 4 billion people worldwide who have a small or no access to basic dental care. Peru is one of the places in Latin America that needs attention when it comes to oral health care. The highest level of caries disease was biostatistically found in Cuzco. A lack of information regarding oral hygiene could explain this high prevalence of caries in Peru, concluding that the cities around the country of Peru need volunteering intervention. This study is classified as an experience report and a description of a dental volunteer program event. The proscript author has experienced an entire volunteering work in dentistry as an academic dental medicine student. All the activities developed were localized in the city of Cusco in the center of public health named Centro de Salud Clas Wanchaq, promoting oral health actions daily and being able to put into practice the techniques learned before in Brazil. Conclusively, in terms that express the ethical considerations in community oral health, it is necessary to discuss an overview of community oral health from an ethical perspective, including the importance of equity, human rights, and social justice in providing oral health care.

**Keywords:** Community Dentistry; Oral Health; Preventive Dentistry; Volunteer Worker.

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## **1. Background**

It's not new scientific information that people in lower-income societies are facing significant challenges in accessing primary oral health care during their entire lives, in a way that authors like Arefi *et al.* (2020) have affirmed in their study that there are higher rates of oral disorders occurring among the most disadvantaged. Globally, dental diseases disproportionately afflict poor people and there is a higher population likelihood of poor oral health at every age for individuals who are low-income, uninsured, members of racial/ethnic minorities, immigrant, or rural populations than for populations with better access to quality oral health care [7, 9].

Articles and researchers dentists express that oral healthiness discrepancies reflect unequal opportunities to be healthy, making disadvantaged groups even more disadvantaged about their oral health; correspondingly, reducing oral healthcare dissimilarities means giving underprivileged social groups equal opportunities to be healthy [7]. The studies on oral health effects of individual income and of societal income inequality need to enhance their theoretical and methodological rigor. Well-designed epidemiological studies that exploit ongoing methodological advances in epidemiology and statistics, as well as theoretical developments in social epidemiology, are likely to address current knowledge gaps on income-related inequalities in oral health [8].

In 2016, the World Dental Federation adopted a new meaning of oral health and identified five driving determinants for oral health outcomes: genetic and biological factors, social environment, physical environment, health behaviors, and access to care. While healthy behaviors are essential to maintaining good oral health, focusing exclusively on personal responsibility is not the answer [9]. Following these impacting details, teaching institutions mostly from high-income countries, along with other nongovernmental organizations (NGOs), have facilitated the provision of dental services by outreach program volunteers to low- and middle-income countries [1].

Volunteering programs worldwide create a fundamental positive new experience between the students and professional specialists who are able, available, and with the initiative to help others without any kind of financial



purpose, their objective mostly is to give some relief to those involved in the approximately more than 4 billion people worldwide who maintain a small or no access to basic dental care, particularly in low-and middle-income countries. Studies were able to explain that oral health programs have shown a lot of ways to promote dental care and integral health in countries that need more people volunteering, being capable of carrying the techniques, multidisciplinary knowledge, materials donated by companies, and significant humanity, not just in medicine, but in dentistry and other areas as well. A paradigm shift is proposed and needed for an entire population public health approach that highlights integration with additional healthcare professionals. Like physical activity for general health, oral sustenance is one of the most important lifestyle-related determinants of health [2, 3, 13].

Peru is one of the places in Latin America that needs attention when it comes to oral health care. According to Cadenas *et al.* (2020), different regions in Peru including the rural (Lake Titicaca region) and urban areas (Cuzco, Lima) have a high prevalence of caries. The highest level of caries disease was biostatistically found in Cuzco, followed by Titicaca and then Lima. A lack of information regarding oral hygiene could explain this high prevalence of caries in Peru. In short, there is also a great number of cases involving severe malocclusion in children, concluding that the cities around the country of Peru needs volunteering intervention, at the try to generate better oral health promotion and other sort of dentistry educational interventions to prevent and treat [4, 5].

The existing public health and health system responses are largely inadequate, inequitable, and costly, leaving billions of people without access to actual basic oral health care. In conclusion, in terms that relate to Peruvian dental care expectations for the future, Akram *et al.* (2017) affirm explicitly that new oral health strategies and programs need to be introduced to the Peruvian population to close the gap in the use of oral health services, currently driven by economic inequalities. Conclusively, in terms that express the ethical considerations in community oral health, it is necessary to discuss an overview of community oral health from an ethical perspective, including the significance of equity, human rights, and social justice in providing oral health care to underserved people [2, 12].



## **2. Methods**

This study is classified as an experience report and a description of a dental volunteer program work that occurred during the date posteriorly described. The author has experienced an entire volunteering work during three weeks in dentistry as an academic & dental medicine student approved in a program to take oral health care from Brazil to Peru. All the activities developed were localized in the city of Cusco in 2023. During the 2nd semester of 2023, more specifically the months of July and August, the proscript writer served in the center of public health called “Centro de Salud Clas Wanchaq”, promoting oral health measures daily and being capable of putting into practice the techniques learned before in Brazil with the supervision of other Peruvian dentists inside the local community clinic. The program “Dental Care Assistant” is coordinated by a non-governmental organization named Peru Volunteer and Travel, which has the purpose of elevating public health work at the “Centro de Salud” in Cusco, responsible for helping and offering opportunities for adults and children to have dental care access, also provides the experience to externship abroad, being beneficial when it comes to social services in health areas during the practice of basic dental procedures, just like extractions, prophylaxis, and carie lesion removal. All the content activities described were authorized and correctly supervised during the execution by dentists and the Peruvian Health Ministry, respectively.

## **3. Results**

### **3.1 Volunteer Program Aspects**

The process of being part of the volunteering team requires, first of all, the curricula examinations associated with the profile evaluation of the student who applied to the program. To know the volunteers better, they ask about their language knowledge, academic history with extra activities like projects and scientific publications (a mandatory condition), social capabilities, and dental intervention experience which helps the nongovernmental organization select their staff (**table 1**). Also, they ask for a substantial personal letter of introduction in the application process, which describes the student's intentions in the volunteering work.



Table 1. Main aspects evaluated and required by the program during the volunteer abroad application process.

Language	Experience Comproved	Curriculum	Requirements
Spanish and English	Performing prophylaxis, restoration interventions, and basic dental extraction	Dentistry graduation with minimum intermediate level	Criminal antecedent (when necessary), academic history with possible publications and projects, being over 18 years old, leadership and ability to take initiative

Source: authors (2023).

### 3.2 Patient's Profile

After the approval and volunteer planning, the dental execution directed to the Peruvian population started during a middle day shift, during the morning it was possible to know the patient's profile before any kind of intervention, with help and professional assistance. Like any other clinic or hospital, the aspects of any person, in particular, could be seen as we start making the anamneses, diagnoses, and odontogram reviews (patients who already had dental records at the clinic). People who received interventions inside the Clas Wanchaq Health Center presented a lot of different personality types, profiles, genders, ages, and common places of living (Table 2) during the treatment. Furthermore, it's substantial to confirm that a patient has never been left unattended because of these aspects, considering that everyone has interpersonal characteristics.

Table 2 - Primordial and personal aspects of the treated patient during the volunteer work during July and August 2023.

#### Gender

Male, Female, Not Specified.

#### Common Personality Traits

Extroversive and Introversive  
 Optimistic and Pessimistic  
 Confident and Shy



Curious, Sensitive, and Insensitive  
Calm and Aggressive  
Trusting and Aware of their condition  
Sociable/Unsociable

### **Ages**

All ages could be attended by the clinic, normally teenagers and adults were more common.

### **Common Place of Living**

Rural Residents.

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**Source:** authors (2023).

Normally, the population managed during the dental intervention could be helped without any problem, but we can express that part of the population has more fear and anxiety, normally in cases of necessary dental extraction or pain cases, also the children occasionally presented limitations or complications to finish their treatments. Besides, the dentistry protocol was always made, even when limitations were given.

### **3.3 Usual Dental Problems Reported**

All the patients also provide a perspective of their dental situation during the evaluations, showing and expressing their complaints with pain, clinical aspect or not. The clinic had its own system of records saved inside the reception, which made it easier for the population to access dental and health history. It was possible to see and to accompany some cases that needed forwarding because inside the clinic there is no possibility of dealing with more complex and severe cases, just as endodontic pathology and impacted third molars, for example. During the evaluation, the patients express and explain their symptoms (**Table 3**), simplifying the diagnosis protocol, and making it easy to plan the treatment based on their dental needs.

**Table 3.** The dental situation associated with the diagnosis and clinical aspects of the Peruvian patients during volunteer work in 2023.

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#### **Common Reported Dental Situations**

Multiple extension carie lesions  
Excessive dental calculus  
Dental mobility  
Dental mobility associated with pain  
Spontaneous pain



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**Source:** authors (2023).

### **3.4 Dental Procedures**

The execution with supervision and assistance was one of the usual activities performed during the volunteer period. Sometimes it was not possible to expand some procedures or even start some of them inside the public clinic. Endodontic treatments, radiology, oral surgery difficult cases, and patients with special necessities couldn't be intervened because of the specialist's absence, all of this is associated with material limitations, just like drugs or some pharmacological conditions. Patients with systemic complications always need to have a medical history to know the possibility of receiving any treatment. Additionally, the possible procedures performed are included in Table 4, respectively.

**Table 4.** Normally performed procedures in Peruvian patients during volunteer work in 2023.

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#### **Dental Procedures Performed**

Dental Extraction  
Prophylaxis with Tartar Removal  
Carie lesion removal  
Sealant application  
Alveolitis treatment

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**Source:** authors (2023).

The execution of dental extraction was one of the more common protocols put into exercise during the volunteer work, using the basic instrumentals available, which had a big impact. Prophylaxis with tartar removal was the daily procedure to be done, and many patients demonstrated a need for periodontal support therapy and orientations concerning their oral health care. Carie lesion removal constantly offered new viability to keep the teeth structure, to avoid endodontic problems that could posteriorly lead to dental loss or other problems associated.

## **4. Experience Report**

Peru Volunteer and Travel (PV and Travel) and their "Dental Care

Assistant” category is one of the programs known as a non-governmental organization that connects students and professionals with the capacity to give volunteer work in Peru health spaces, like hospitals and public clinics around the country located in Latin America. During the application, it was possible to submit all the academic documents, curriculum, and recommendation letter that prove that the dental student already has experience in clinical attending, research development, language expertise, and knowledge about doing dentistry procedures like extractions, prevention educational oral health approach, prophylaxis, diagnosis, basic restorations interventions, and social communication capability as well. The program is indicated to professionals, specialists, and students who have the verified viability to work with professionalism inside the institution.

After receiving the acceptance notification from the program, the clinical activities were organized to start at the end of July prevailing for 03 weeks of clinical service and interventions in the historical city of Cuzco, Peru. When the volunteer arrives in the country, the team answerable for the project waits at the airport to provide the orientation and to conduct the dental assistant to the place where the new volunteer stays until the end of the assignment trip (**Figure 01**).

**Figure 01.** Member of the Dental Assistant Program welcoming the Brazilian volunteer after the arrival at the city of Cuzco.



**Source:** authors (2023).

The daily routine programmed is to work in the middle day, which could be in the morning or afternoon during the days of volunteering. Every week the coordinator who overlooks the team kept doing the reunions and coming to see the volunteers at the clinic, always giving every needed support (**Figure 02**). It was possible to see how much the members of the program cared about the comfort and well-being of the workers.

During the first reunion, the volunteers receive the orientations about the city with maps, addresses, important emergency contacts, and available 24-hour mobile support, avoiding any complications with the practice documentation and other significant details.

**Figure 02.** Peruvian member of the Volunteer Program at the Public Clinic with the Brazilian dental assistant volunteer to check out the activities weekly.



**Source:** authors (2023).

#### **4.1 The Public Clinic**

The clinic was located in the center of the city, close to compact houses and marketing spaces, where many patients and professionals live and work. It is also important to describe that inside the clinic of the *Clas Wanchaq* Health

Center (**figure 03**) there are dentists responsible for the sector and other professionals of health (like doctors and nurses) who publicly attend to the population. The dental team responsible for the new workers also keeps guiding the Brazilian volunteers about the sort of patient who comes and their primordial aspects, such as the Peruvian clinical routine, products, and materials to be used by the team, respectively. The edifice's size and structure are similar to a small hospital (**figure 04**), serving a lot of health promotion specialties just like a basic health unit, the dental assistant is one of the services in action, as well.

**Figure 03.** Brazilian volunteer in front of the building of Clas Wanchaq Health Center in Cusco, Peru (2023).



**Source:** authors (2023).

The clinic has elevators to attend to special needs patients, a pharmacy, a security team, emergency equipment, and other kinds of basic health aspects able to lend a hand to people in complicated health conditions. The stairs are

usually used by the work-people daily, being able to lead to all the floors. Also, there is a huge demand for patients all day, normally the Peruvian citizen already has a medical and dental record inside of the clinic system, guiding new protocols, new procedures, or any information about the patient's health.

**Figure 04.** The principal entrance to the Peruvian Health Center in Cusco **(A)**. The principal stairs lead to all the building floors **(B)**.



**Source:** authors (2023).

The place is responsible for attending to all the population inside of the city in a building of four floors, the dentistry area is on the 2nd floor, respectively. Inside the dental area, there are two attending rooms capable of managing two patients per time, the waiting room is one of the spaces inside the clinic capable of comforting more people who need or have scheduled intervention.

#### **4.2 The Language Aspects**

The internal language spoken in the town is Spanish and some of the citizens can understand and speak minimal English, but normally only the wealthy part of the population can catch other idioms and communication methods than the first language. The volunteer work requires good fluency in other idioms (Spanish in particular), since the need to understand the entire worker's team and patients is essential, however, it is possible to find pieces of information in English rarely, which demands from the staffer the small communication as possible.



Inside the attending room, Spanish was necessary to do the diagnostics, discuss all the cases, understand generally the patient's primordial problems, give information to the population that uses the services, and also needful at position to share knowledge with the professionals and supervisors, is not an option to know the priority language or the evaluations become not possible to occur correctly. In general aspects, the language was one of the most crucial things during the volunteer execution.

### **4.3 The Procedures and Intervention**

It is substantial to report that all the common protocols, dental procedures, evaluations, and other clinical interventions were commanded by dentists authorized with knowledge and experience. Never a procedure was done without any kind of supervision. When it comes to the public attending details, it was all the population with diverse ages (children, adults, or old people, respectively), complications, or social situations, never did the clinic reject any patient, the only exigence was the dental history record or individuals documents in particular, after presenting the identification on the reception the person waits for the time (if the patient presents urgent dental intervention, the dentist have the option of skipping routine consults and give more attention, if needed).

The first dental care needed to be done was prophylaxis and dental health orientations, with the assistance of all factors before said, respecting the communication with the patient and being able to know what sort of problem they could carry. Extractions (**figure 5**), alveolitis treatment, restorative interventions, sealant application, and other procedures could be performed by the professionals at the public clinic, the only specialties not performed were endodontic treatments and radiology, likewise, complex cases in kids used to be forwarded as well.

When we compare the instruments used in public health centers in Brazil, we may notice how the differences impact the clinical practice, the volunteering showed the need for a new perspective on interventions. Some protocols are different in public clinics caused of the scarcity of materials and other important clinical content.

**Figure 05.** Surgical piece of extracted third molar due to absence of intraoral space in a Peruvian patient using just one universal forceps, clinical basic kit, and apex elevator.



**Source:** authors (2023).

It was possible and clear to see how the poor population requires constant health orientations, in the way that the patients declare minimal information about how to do their hygiene correctly, or even some of them don't have toothbrushes to take care of their oral health as they must. Some patients express severe unhappiness about their social condition, sometimes not being capable of paying for dental intervention and endodontic treatments, leading to the only option that the volunteer group had with the Peruvian dentists, a prescription of medication to relieve the pain or extractions.

The conclusion about this is that pathological pulp cases lead to tooth loss in the Peruvian poor population because there wasn't an endodontic specialist working at the public clinic, and the patients occasionally did not present any interest in doing endodontic protocol or didn't have enough money to pay for it. The common practice executed was prophylaxis daily and orientations, with the tentative of preserving basic oral health as well.

#### **4.4 Social and Economic Impact**

First, the impact of social and economic aspects becomes nitid, in a way



that is possible to recognize that there is a lot of patients who present a variety of pathological types of oral diseases developed throughout their lives, whether due to lack of information, economic conflicts, low information, poverty, and even family neglect.

The city of Cusco is known as one of the historical locations on earth for having one of the seven world wonders (Machu Picchu), making the province known worldwide and the main source of income for residents, businesses, markets, and businesses is tourism. For some, financial issues may be favorable (a small part of the population). Still, in the vast majority, the people do not have beneficial financial stability or do not have any source of high income that allows them to pay for private medical and dental services, seeking in some cases public benefits in urgent or chronic cases.

When contemplating such a divergent reality in culture, economy, and health, it is entirely possible to think of ways to bring or provide a minimum service to the residents of Cusco, in the try of making some difference for those who need it.

#### **4.5 Oral Health Promotion Activities**

Not only the procedures are enough to promote an integral prognostic to the patients, but the viability and promotion of oral health to create an impact on the population about the content that concerns oral health and care. The primordial objective discussed in the introduction letter to the project was to make a difference in aspects involving oral health care worldwide. The first intent of the volunteering project as a dental student focused on carrying out study and complementary activities around the world to qualify the volunteer even more as a professional with humanity, and this is possible with actions to make a difference in oral promotion.

The volunteer acknowledges receiving the opportunity to enter the program was to make all the difference in the learning, meeting other professionals and colleagues that intend to substantially complement the dentistry view based on practice. During the arrival and adaptation, oral hygiene kits donated by Brazilian institutions were distributed to the patients, and with orientations, was possible to teach basic techniques of how to brush the teeth correctly. A short-term goal is



to take advantage of every opportunity in front of the volunteer work and understand that these actions build a human vision of the profession from the small classes to others.

## **5. Discussion**

The need for a paradigm shift from highly technical, individualistic dental training curricula, and the essential of instilling a holistic approach to ethical and social responsibility in new dental graduates is discussed and it's also important. Sharing skills with local Dentists during these activities turns on an entirely new perspective on how significant it is to set into practice learning and humanity, in a manner that the differences between approaches could impact during the attending services.

Practices and policies for extending and expanding oral health care must be based on ethical and safety concerns by persons delivering oral prevention, treatment, and care to patients [6]. The social conditions affect the high percentual of caries disease, according to Akram *et a.* Clinically, many patients evaluated presented at least one dental cavity caused by a chronic caries lesion, proving that the studies expressing how Peru has a deficient oral condition adjust how we notice and prepare ourselves to help this social consequence [4, 5].

Social impact, chronic oral complications, minor information about buccal risks, and other pathological aspects were seen and superficially analyzed easily during the clinical practice. The impacts noticed influence the population effectively, exhibiting how dental education could aid a lot of people who don't have any information about their health and how this affects their integral health and/or their quality of life. The absence of some dental specialists also complicates how the population receives some treatments, endodontic professionals are missable inside public clinics around the world, just like pathologists and maxillofacial surgeons.

In many countries, oral health is deemed a low priority and attributed to individual, rather than social responsibility. However, a few countries include dental services for some or all population groups, suggesting that the exclusion of oral health leads to risks undermines systemic health outcomes, and exacerbates health disparities. Neglecting oral health also has negative



consequences for health equity [9].

The fact that most oral diseases can be prevented with early intervention may underlie the emphasis on personal responsibility in maintaining good oral health. The prevention actions associated with more volunteer programs in low-income countries could assist in the objective of building better opportunities for those in critical conditions. Health education, mass communication, and community events are often essential elements in health promotion. In disease prevention, many countries consider the link between oral health and general health conditions. It is important to express that according to studies, family conditions and cultural, health demands, affordability and availability of services, social environment, and geographic factors can affect dental health access and equality [9, 10, 11].

People should be motivated to healthy behaviors such as typical physically active practice and oral hygiene maintenance through tooth brushing, in addition to the classic lifestyle approach, including adjusting habits and works to improve health, methods focused on different strategies to facilitate the promotion of oral health. To reach this goal, a multi-sectoral, comprehensive and integrated approach is needed. Future research to deeply understand the system dynamics of the interplay of oral diseases is desirable and necessary to plan and carry out social, political, and environmental strategies to reduce these limitations [13].

With other programs, and objectives developed inside universities around the world, volunteer projects could be effective in oral health promotion giving poor populations around the world more taken care of, leading to a bigger number of people with minimal oral health access, similarly, the priority is also give to students and dentist more pieces of information about how their availability in help could make a difference.

## **Conclusion**

The volunteers of this project could realize that even small and significant achievements in providing health care in different places to explore the skills in helping people change their dental perspective early learned at Brazilian University. The correct investigation objective benefits the improvement of volunteer work, inducing the research practice in poor countries to explore new



quantitative evaluations about carie diseases, periodontal issues, and the necessity of specialists inside the public system around Latin America. News reports worldwide and shared knowledge of tooth loss can encourage others to share the promotion of oral health as a common thing. Volunteering is one of the considerable ways to promote health care around the world.

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