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**Bridges and Barriers:
Physiotherapy and the Physiotherapist's Experience of Treating
Musculoskeletal Disorders in Western Ecuador. A Qualitative
Study.**

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ABSTRACT

BACKGROUND: Ecuador is a Spanish speaking country located in northwestern South America with an approximate population of 16 million people. It is considered a developing country. The public healthcare system is divided into three branches and there are also private services available. Musculoskeletal disorders are overly represented in the developing world, especially where poverty and rural living are factors. Physiotherapy is included in the health care system but there is a lack of literature describing physiotherapy practice or the physiotherapist's experience of working with musculoskeletal disorders in Ecuador.

AIM: This study aims to describe a group of physiotherapists' work as well as the experiences of their work in the rehabilitation of musculoskeletal disorders in Ecuador.

METHOD: This qualitative study used semi-structured interviews and a content analysis method. Seven Ecuadorian physiotherapists participated in face-to-face, semi-structured interviews (Index I). Interviews lasted between 35-60 minutes and audio was digitally recorded. The interviews were transcribed and coded in Spanish. Prevalent and common themes from each interview were compiled and further organized into main themes and subthemes.

RESULTS: The results of the study were first grouped into two main categories; that which describes physiotherapy in Ecuador and that which describes the physiotherapists' experience. Patient groups, access to healthcare, patient referral, physiotherapy process and specific techniques and equipment are described. The physiotherapists' experience was described as a balance of bridges and barriers. Three aspects which cause difficulty in their practice were identified: (1) Limitations to autonomy (2) Economical and political factors (3) Access to continuing education. Three aspects which support and facilitate their work were also recognized: (1) Professional satisfaction (2) Physiotherapists' role and identity (3) Development of profession.

CONCLUSION: While the participating PTs were faced with many challenges in their physiotherapy practices, there was a pervasive tone of satisfaction, optimism, and inspiration for progress and a better future.

KEYWORDS: Physiotherapy, Ecuador, Experience, Qualitative, Developing country

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Bridges and Barriers: Physiotherapy and the Physiotherapists' Experience of Treating Musculoskeletal Disorders in Western Ecuador. A qualitative study.

BACKGROUND

Ecuador is a country located in northwestern South America along the equator with approximately 16 million inhabitants. Spanish is the official language spoken by 93% of the population while many smaller indigenous languages are also spoken (1). Major industries include petroleum, agriculture, and fishing. Ecuador is considered a developing world country and suffers from both income and regional disparity. There are public government subsidized and private healthcare services available to citizens. As with many services, the resources available at health care facilities vary greatly (2).

Healthcare in Ecuador

The public healthcare sector is composed of three main entities: 1) The Ministry of Public Health (MSP), which offers services to both nationals and foreigners residing in Ecuador, 2) the Ministry of Economic and Social Inclusion (MIES), responsible for the inclusion of the vulnerable population, and 3) The Ecuadorian Institute of Social Security (IESS) (3). The IESS, which covers 53% of the population, offers services throughout the country for the salaried population which includes specialty and basic hospitals and health care centers (4). Private health care is also offered, but only 3% of the country's population use private health care coverage (5) (Diagram 1).

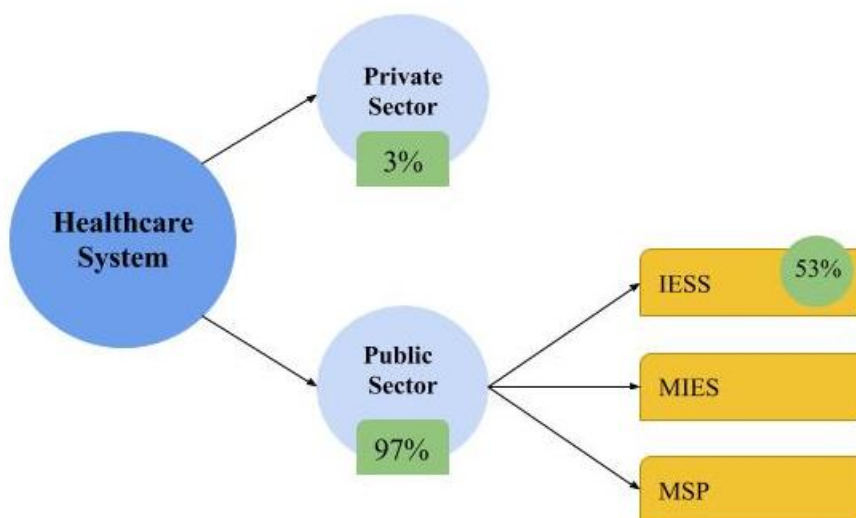


Diagram 1: Division of Ecuadorian healthcare system

Physiotherapy in developing countries

In the developing world, musculoskeletal (MSK) disorders including osteoarthritis, osteoporosis, spinal disorders, limb trauma, and rheumatoid arthritis are highly common and anticipated to increase (6). MSK disorders represent a higher proportion of disease burden in the world and research has shown a greater prevalence where socioeconomic factors such as low income and rural living are present (7). Physiotherapy for MSK disorders is important for rehabilitation services in developing countries (8). It is suggested that beyond promoting mobility and contributing to pain relief, physiotherapy can play an important role in the implementation of a cost-effective rehabilitation service (8). Physiotherapy is a service available at many healthcare centers within Ecuador. However, available information on the use of physiotherapy in treating MSK disorders is limited.

The development of physiotherapy varies from country to country and is affected by different factors including local norms, conditions and, in some cases, major events (9, 10, 11). There is however no available information on the development of physiotherapy in Ecuador. The Ecuadorian Society of Physiotherapy became a member of The World Confederation for Physical Therapy in 2003 and there currently are an approximate of 3000 practicing physiotherapists in the country (12).

Physiotherapists experience

Qualitative research allows for the investigation of the experience of a phenomenon; allowing new concepts and themes to arise from the participants' personal thoughts, feelings, and behavior in a certain context. Results from qualitative research are not generalizable from one population to another (13). The authors are not aware of any literature describing the PT's experience in Ecuador or elsewhere in Latin America and suspect that experience is highly influenced by cultural and socio-political factors. While PTs experience is not transferable from one population to another, it is possible that factors affecting experience could be similar from one population to another. A recent qualitative study in Ireland examining the PT's perspective of musculoskeletal services in primary care identified a number of perceived barriers including physical infrastructure, equipment, interaction with acute sites, administration support and engagement in continuing professional development (14). In Canada, a qualitative study examining the PT's role in primary care identified five major roles that PTs take on; manager, evaluator, collaborator, educator and advocate. These roles were influenced by three factors; inter-professional team, community and population served, and organizational structure and funding (15). Many studies examining the PT's experience have chosen to focus on a specific intervention or pathology rather than general experience. For example, the experience of working with Basic Body Awareness Therapy, neurological disability, obesity, ACL injuries, or the PT's role in an acute setting are just a few of many investigations into the PT's experience (16, 17, 18, 19, 20). In order to better understand the physiotherapists' experience in Ecuador it is necessary to also describe the way in which physiotherapists (PTs) practice there.

AIM

The aim of this study is to investigate and describe a group of physiotherapists' work as well as explore the perceptions and experiences of their work in the rehabilitation of musculoskeletal disorders in Ecuador.

METHOD

Procedure

This qualitative study used semi-structured, face-to-face interviews to examine the way in which PTs practice as well as their experience working with musculoskeletal disorders. Data was collected over a four-week period in the provinces of Santa Elena and Guayas which are located in the western part of Ecuador. The interviews were conducted at the participant's place of work, see interview guide (Index I). Both authors were present during the interview procedure and all interviews were conducted in Spanish. Interviews lasted between 35 to 60 minutes and audio was digitally recorded. When possible participants were interviewed in a private room, otherwise in an open room clinic setting.

Participants

Participants were seven PTs who lived on the western peninsula of Ecuador, who worked either in public hospitals or private clinics (Table 1). Inclusion criteria for participants included a minimum of four years working professionally as a PT, professional education as a PT at an Ecuadorian university as well as Ecuadorian nationality. Participants were recruited through personal contacts, referrals from other participants and social media. Participants were verbally informed of the nature of the study and that participation was completely voluntary (Index II). The place and time of interview were chosen by the participants. The participants had a range of experience from 4-29 years and a mean of 12 years experience. Two males and five females were interviewed. The median age of the participants was 42.

Table 1. Participant profile

Participant	Practice Setting	Age	Gender	Years of experience	Specialization/ Clinic type
1	Private Practice	55	Male	29	Injuries and trauma
2	Private Practice	30	Female	5	Burns, trauma, sports
3	Private Practice	29	Female	6	General physiotherapy
4	Private Practice	31	Female	4	General physiotherapy
5	Private Practice	56	Male	28	Alternative physiotherapy
6	IESS and Private Practice	30	Female	7	General physiotherapy
7	Public Hospital	30	Female	5	Children

Data Analysis

To analyze the interviews, a content analysis method was used (Diagram 2) (21). The digitally recorded interviews were transcribed by the authors in Spanish. One of the interviews was further translated into English by the authors. Transcribed materials totaled 75 pages (1.5 space Times New Roman). All interviews were read and discussed by both authors to get an overall sense of the content. The interviews were then coded by the authors individually and the English translated interview was additionally coded by the authors' supervisor. The content analysis of the one interview that had been translated into English was discussed and compared between the two authors and their supervisor. Coding for each of the other six interviews was discussed and agreed upon between the two authors and major themes were drawn out from the content. Codes and themes were then translated into English. Common themes from each interview were compiled and further organized into main themes and subthemes (phase I). The process of categorizing and grouping into themes and subthemes was accomplished in several stages. In phase II categorizations from phase I were discussed again and reorganized. In the final stage of analysis, all categories and themes were further discussed and decided upon with the authors' supervisor while simultaneously reviewing the first stage of coded material to be sure that no important concepts had been lost (phase III).

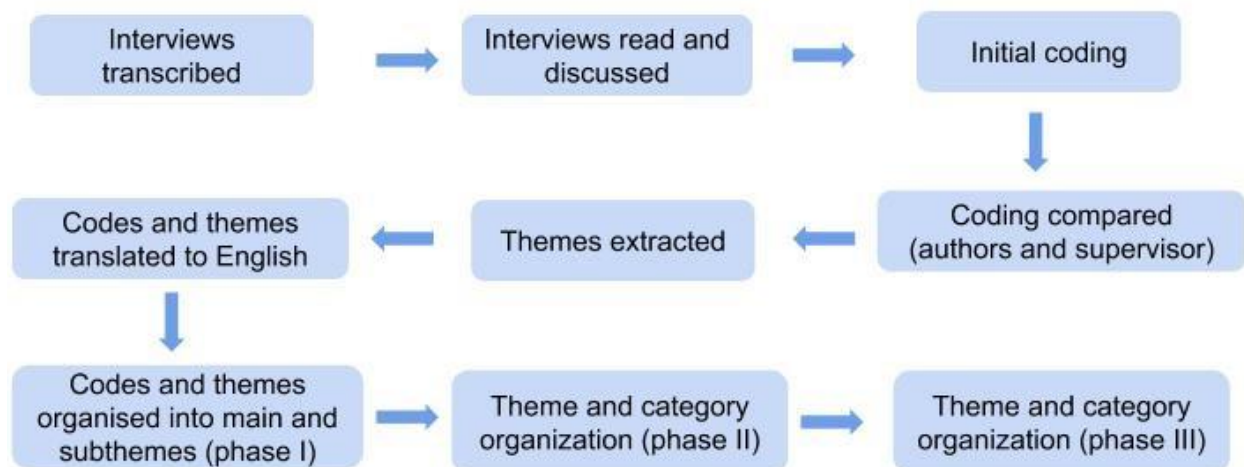


Diagram 2: Data analysis process

Ethics

Participation in this study was voluntary and participants were informed that they could choose to not answer any question or terminate the interview at their choosing. The participant's name and clinic were never recorded in audio or writing, and the recorded audio and transcribed interviews were accessible only by the two authors. One transcribed interview was made available to the authors' supervisor. The participants were informed that their information and answers would remain confidential (22).

RESULTS

The results of the study can first be grouped into two main categories; that which describes physiotherapy as practiced by the participants and that which describes their experience.

Description of Physiotherapy in Ecuador

Patient Groups

The majority of the PTs specialized in working with trauma patients which included joint fractures and replacements, ligament injuries, post-surgery rehabilitation, shoulder, back, and neck trauma as well as sports injuries. Most of the interviewed PTs were working primarily with adults and the elderly. With the exception of the PT who specialized in working with children, very few of the PTs interviewed worked with children or young adults. Other pathologies included neurological disorders, headaches, scoliosis, pathologies related to a sedentary lifestyle, arthritis, chronic pain, obesity, and overuse injuries among factory workers. Patients at the

children's hospital were often diagnosed with neurological disorders such as hydrocephalus, microcephalus, cerebral palsy, Down syndrome or genetic disorders.

Access to Health Care and Neglected Patient Groups

When asked about which groups were potentially neglected or did not have access to physiotherapy treatment, the PTs brought up a range of different pathologies or groups, a few of which overlapped. Many agreed that there were not enough specialized facilities in general, but especially for neurological disorders and neurological trauma. Specialty clinics for women, and specialty clinics for oncology were also commonly named as lacking both in facilities and expertise within physiotherapy.

Patient Referral

All of the interviewed PTs described that most patients were referred to them by doctors, hospitals, and other medical clinics. In most cases, it was the doctors who decided when it was appropriate for a patient to have contact with the PT. In the case of referral from a doctor, the patients often arrived to the PT with a diagnosis, prescribed treatment and number of visits. After the completed prescribed treatments and number of visits, the patient would then return to the doctor for re-evaluation. While at the public and IESS hospital the patient can only come to the PT with a referral from a doctor, in the private clinics the patients were able make an appointment at their own discretion and were commonly referred by friends or family. When working privately, PTs were at liberty to evaluate the patients themselves.

Physiotherapy Process

Most of the therapist described a process with the patient that involved an intake interview, physical evaluation, treatment, and follow-up. The interview was described as an important step in getting to know the patient and building trust.

“You have to get to know who the person is so you can build trust. The patients come with fear, and it’s important to enter into their confidence in order to give the best therapy.” -Interview 2

The majority of the patients came to the PTs with a diagnosis and a prescribed treatment, however all of the participants emphasized the importance of doing an independent evaluation of the patient. Also emphasized was the importance of doing a thorough evaluation and looking for the root cause of the problem and not just the symptoms. After the evaluation, PTs would compare their evaluation with that of the medical doctor. Posture, movement patterns, range of motion, strength, and pain were all mentioned as evaluation points.

When describing treatment, all of the PTs stated that they did not use a specific protocol. It was commonly stated that the treatment must be individualized to the patient and be aligned with their lifestyle and what they could accomplish. Over the course of the treatment, therapy would

then be adjusted to the patient's individual progress and needs. The two most experienced participants both described the importance of combining a variety of techniques to find what best suited the patient and not just following a protocol.

Specific Techniques and Equipment

A variety of techniques were named as being used in treatment and varied somewhat between the PTs. Exercise therapy, joint mobilization as well as manual therapies were commonly mentioned by nearly all PTs. Exercise therapy could involve equipment such as pilates balls, TRX, common gym equipment, bosu-balls, kettlebells, resistance bands, and functional exercises involving the patient's own body weight. Manual therapies specifically mentioned included trigger point therapy, fascial techniques, muscular or massage techniques, traction, and joint manipulation. The use of equipment such as electrostimulation therapy, hot/cold compresses, infrared rays, laser, ultrasound, and magnetic therapy were also commonly mentioned. In addition to these repetitively stated techniques, there were several that were named in only one or two of the interviews. These included Mulligan, Kaltenborn, Crochet hooks, Busquet, dry needling, Williams, and kinesiotaping. There was one participant who specialized in alternative therapies and was also working with acupuncture, tai chi, qigong, and breathing exercises. Hydrotherapy or therapy in a pool was also named in two of the interviews with small pools being incorporated in the private clinics. The PTs descriptions of using equipment often contained key attitudes about the use of equipment. Generally, the PTs felt that there was an over reliance on the use of equipment, and that they were in many ways just following trends. As one PT described when asked about equipment,

"We follow a lot of trends. Taping came and we're trying to tape up the eyes." -Interview 2

The Experience of the Physiotherapists

The different aspects of the participating PTs' experience were divided into two main categories; barriers and bridges (Diagram 3, 4). The authors defined barriers as those experiences that presented a limit, obstacle, or hindrance to the PTs' work. Bridges were defined as those aspects which facilitated, supported, encouraged or made the PTs' work easier.



Diagram 3. Barriers



Diagram 4. Bridges

Barriers to the Practice of Physiotherapy

The major barriers identified by all of the PTs can be divided into three categories; limitations to autonomy, economic and political factors, and access to continuing education (Table 2).

Table 2. Barriers to the practice of physiotherapy	
Limitations to Autonomy	<ul style="list-style-type: none"> - Patient referral system - Hierarchy and low professional status - Patients' perceptions of physiotherapy
Economic and Political factors	<ul style="list-style-type: none"> - Lack of facilities and departments - Tough job market - Low salary
Access to Continuing Education	<ul style="list-style-type: none"> - Lack of specialized courses - Travel abroad for specialization - Limited by work to pursue higher studies

Limitations to Autonomy

Patient Referral

As previously described the majority of referrals to physiotherapists are initiated by doctors who make an assessment of the patient prior to referral. The interviewed physiotherapists expressed a general dissatisfaction with the existing referral system, especially when doctors were very prescriptive in their referrals.

Several participants felt that doctors lacked understanding of the scope of physiotherapists' practice and mentioned that despite having limited knowledge in physiotherapy, doctors were the ones assessing and prescribing therapy.

“Doctors are neither prescribers of exercise nor therapy. Here they like to invade the field and say -do this-, when in reality it should be the physiotherapist that applies the required technique.” -Interview 1

According to the participants, some doctors still think of physiotherapists as masseuses and do not consider rehabilitation to be an important part of a surgery or rehabilitation process. This lack of awareness and recognition of physiotherapy practice led often to conflict between the two parties, creating frustration amongst PTs.

“Doctors think that you don't have a right to tell him that he is wrong, because he thinks you only do massage.” -Interview 4

“They have to realize that we are much more than that. We are much more than that because we are the other half of a surgery, of an operation, of a general doctor, of a trauma doctor.” -Interview 4

Nevertheless, some of the participants were optimistic and pointed out that younger doctors were more interested in interdisciplinary work, giving physiotherapists the freedom to exercise their professional judgement and decision making.

Hierarchy/Low Professional Status

When the participants were asked to consider their role as PTs and their cooperation with other medical professions, most pointed out the existence of a hierarchy, where doctors were regarded as having the highest level of expertise. PTs often described themselves as being the last thing patients and doctors resort to.

“Medics are considered to be the pope, but they are not.” - Interview 1

“Physiotherapists are the bottom rung of the ladder” - Interview 4

The existent hierarchy was considered as a barrier to teamwork, however, the PT that was working with children had a different view on the cooperation that PTs had with doctors. The participant mentioned that doctors, nurses, occupational therapists and physiotherapists work as a team where everyone is considered to be at the same level and can contribute to the team with their expertise.

Patient Perceptions of Physiotherapy

The lack of professional recognition from the medical community had an influence on patients' perceptions of physiotherapy. There were patients who did not trust in PTs' knowledge and skills to give them the right treatment and wanted the PT to only apply the treatment that the doctor had prescribed. This was considered as a source of conflict between patients and PTs.

"I know that I could do something else, but it's the patients who say 'no! Only ice and ultrasound.' In the end patients trust more in their medic than in what the physiotherapist says."
-Interview 2

Many PTs shared that they did not feel completely free to choose the treatment because of pressure both from the patient and from the doctor. Often the PT felt pressured to use equipment even when they did not feel it was the most adequate treatment.

"The patients say, 'Use the little machine! I want the machine! They used it on my cousin and it cured her!' And the truth is... I used to go through the trouble of explaining and discussing with the patient... but now I just use the machine. Fine, you want the machine, I'll use the machine."
Interview 2

"On many occasions patients go to their medic and tell them that we are not treating them as prescribed. That is when the problem starts." -Interview 4

Economic and Political Factors

Certain economic and political factors of the society affected the PTs work and were viewed as barriers to their practice.

Lack of facilities and departments

The general opinion was that because of economic factors there were far too few physiotherapy facilities and PTs working in the public sector. Lack of specialized facilities and departments offering physiotherapy consolidated all patients to a few centers. As a result of this, there was a very high work load for PTs. High patient quantity lead to a lack of time per patient, and many PTs expressed that this volume lowered the quality of their work and the possibilities of what they could do with the patient. There was a general frustration and disappointment in the PTs working in the public sector that they could not do more for their patients. In one public hospital the PT was working with 18-23 patients per day in an 8-hour day. In another instance the PT claimed she saw 150 patients per day. Another therapist described a children's center in a rural area with just 2 PTs working for the whole region seeing a max of 24 patients each per day.

“It's a killer for just one person.” -Interview 6

The high patient load for therapists also lead to long wait times for patients and made it difficult for PTs to give consistent or continuous therapy, which was a frustration for many of the PTs. In the private sector patient quantity was much lower, but other economic and political factors were present. Both in the public and the private sector PTs felt that it was a challenge for many patients to pay the patient fees and that this affected access to physiotherapy negatively. Specifically, families with children in need of physiotherapy were named as being placed under economic hardship for medical fees. Privately working PTs felt that general economic hardship in the country put pressure on them to lower their fees and that this lowered their professional image and the perceived value of their work.

Job Market

Other dominant political and economic factors named by the PTs which negatively affected their work were related to the job market. A struggling job market within the country made it difficult to find full time employment. This often resulted in privately working therapists lowering their fees or new PTs working for free or minimum wage. Multiple PTs also discussed competition in the job market with “*inadequately trained*” professionals from Cuba who were charging a fraction of the cost per treatment. They believed these professionals did not have the expertise of PTs and were lowering the standard and image of PTs in general. While the title licensed physiotherapist was protected according to the participants, this law was not being enforced or these other professionals would use a similar but modified title.

Salary

According to the participating PTs, there is a difference in salary between the private and public sector. The salary was regulated by the government, and after the most recent election and implementation of the new government salaries were increased in the public sector and are now currently higher than in the private sector. As previously mentioned, the PTs also described that most newly graduated PTs are working for free or minimum wage. Multiple PTs expressed frustration about this and viewed it as devaluing to the individual's competency and labor. Even those with experience shared that a full time job often does not cover the cost of living and it is therefore necessary to make independent home visits for supplementary income. Most of the PTs agreed that their salary was not appropriate to the work being done.

“If I was paid for the work I do, I would earn three times as much!” -Interview 6

Some felt that this was true of all careers in society as a whole, while others felt that it was reflective of PTs low social standing both in society and the medical community. Many expressed that it was much more desirable to work in the public sector even with a heavier workload because the salary was higher. Among those working in the private sector, there was

frustration about patients who undervalued their work and were not willing to pay the appropriate fees. Attempting to bargain the PTs' fees down felt like the patients did not value the PTs' competency, time, or education.

Access to Continuing Education

The participants discussed limited access to continuing professional education as a problem for the development of physiotherapy in Ecuador. According to the participating PTs, there were no continuing education programs or specialized courses offered at any university in the country.

“The students want more than just a basic education. They want to do a masters, to be able to specialize.” -Interview 7

For therapists who wanted to specialize or learn specific techniques, it was necessary to travel abroad. Argentina was named several times as an option for continuing education along with USA, Mexico, Brazil, Peru, and Uruguay. These countries were described as the most economically feasible, though if possible there was also interest in Europe. One of the PTs who was also a professor at the university emphasized the importance of continuing education and described his own efforts and frustrations with trying to bring teachers of specific techniques from abroad, but that he was limited by economic factors. Besides limitations in access to continuing education, many therapists also experienced that they were not permitted the time off from their place of work to pursue higher studies. Those that brought up continuing education felt that it was both important and difficult to specialize or continue learning in Ecuador.

Bridges to the Practice of Physiotherapy

The bridges identified by the interviewed PTs were divided into three categories: professional satisfaction, physiotherapists role, and development of the profession (Table 3).

Table 3. Bridges to the practice of physiotherapy	
Professional Satisfaction	<ul style="list-style-type: none">- Enjoyment in helping the patient- Patients' gratitude- Enjoyment in seeing patient progress- Enjoyment of their profession- Comradery with the patient
Physiotherapists' Role and Identity	<ul style="list-style-type: none">- Primary and key role in rehabilitation- Returning patients to daily life- Physical and emotional support of a patient
Development of Profession	<ul style="list-style-type: none">- Slow improvement of profession- Increasing respect from medical community and general population- Growth of the career

Professional Satisfaction

The interviewed PTs expressed a high level of satisfaction in their work. The desire to help others and satisfaction in doing so was a theme woven throughout each interview. Enjoyment in helping the patient and seeing them progress and improve their condition was a source of continued gratification to the PTs. To see the progress and achievements of the patient, witness their improved quality of life, and receive the patient's gratitude throughout the process were sources of encouragement in their work.

"You see how people come with desperation and leave with a smile." -Interview 5

"You see the patient suffering and you are able to help them. It's a very special and beautiful experience." -Interview 7

There was an overwhelming sentiment among the PTs of loving their work. Many described their work as their passion and as what they liked best in life, and that they could not possibly imagine doing something else as a career. Other anecdotes were shared describing that the PT didn't even mind working overtime, because she loved it so much.

"I like everything. Even the bad moments" -Interview 3

Comradery with the patient was another theme that returned again and again as a deeply satisfying aspect in their work.

"I love the moments with the patient. The comradery you can achieve. Many patients are converted into your friend." -Interview 2

"You fail as a physiotherapist if you don't befriend the patient. That way you will know how to treat him better." -Interview 4

Some even described the feeling of the patient being a part of their family, and that they became closer to the patient than their family as a result of working so closely with them in the rehabilitation process. The PTs experienced that the patients enjoyed coming to therapy and that there was a strong motivation to work because of the connection to the patients. When asked about the PT's role in the rehabilitation process, many described the importance of building relationship with the patient.

"It's important to empathize with patients, become their friends, almost like family. That is the role of a physiotherapist who loves what he does." -Interview 5

Building a friendship with the patient was considered one of the greatest satisfactions of their work.

Physiotherapist Role

All of the interviewed PTs expressed that they had a primary and key role in health care and that their role was fundamental in rehabilitation. Expressions such as *"stealing the show"* in rehab, or describing PTs knowledge base as *"mini doctors"* illustrated feelings of PTs importance in healthcare. They described their primary role as returning the patient to daily life; returning patients to function, general physical condition, to their sport, to their daily activities, to their work and to society. Their role with the patient involved looking for what was best for the patient, encouraging the patient to positive possibilities, and building confidence in the rehabilitation process.

"Sometimes it's not the technique that is the most important, but how you treat the patient." - Interview 1

They described the PT's role as much more than just physical rehabilitation, but also as emotional support to bring a rejected person back into society, their own autonomy, and independence. Empathy was named again and again as an important quality to the PT along with patience and dedication.

Professional Development and Recognition

There was a tone of optimism among the interviewed PTs in regards to the development of the career and professional recognition in the medical community and the society at large.

“The quality of physiotherapy is getting better in all aspects.” -Interview 7

While there was general dissatisfaction about the current situation, there was also the sentiment that it is slowly improving. Many felt that PTs' opinions and role were beginning to be more respected both in the medical community and the general population. Several therapists mentioned that the younger new generation of medical doctors were more interested in interdisciplinary work and valued the PTs' expertise. There was also a sentiment that interest in the career is growing, more students were enrolling, more women were enrolling in what was traditionally a male dominated career, and more health centers were offering physiotherapy. Several therapists expressed that the image of physiotherapy was improving and that they were starting to gain societal recognition, but often due to individual experiences of the rehabilitation process.

DISCUSSION

Method

There were many challenges that presented limitations in the design, procedure, and analysis of data in this study. The authors' aim was to enroll 7-12 participants. The logistics of making contact with physiotherapists in the region, traveling to their places of work, and the authors' limited time onsite constrained the number of possible interviews. The authors did not reach *saturation* in the development of new themes and ideas. The authors would have also liked to have a more even spread of years of experience between the participants. Five of the seven participants had 4-6 years working experiences and were all women, where the other two had 28-29 years working experience and were both men. Difficulty in recruiting participants also made it impossible for the authors to specify a field of practice within physiotherapy as an inclusion criterion. While most patients seek out public healthcare, the majority of the interviewed PTs were working privately. The authors could not find statistics on the number of PTs working privately or publicly, but ideally would have liked to have a more balanced number of interviews between PTs working in the private and public sectors. The available information found by the authors regarding access to public and private health care comes from the Ecuadorian government, and it is possible that it is not accurate.

The description of physiotherapy was based solely on interviews and did not include observation of the PTs in practice, which could have perhaps differed from what the participants shared. First

contact was often made with the physiotherapists onsite at their place of work and it was not possible to secure a private room for the interview procedure in all cases. The authors felt that there may have been one specific case where the interviewee was self-conscious that others may have been listening and may have answered differently had the interview been in private. Also, due to the open room setting, sound quality in the audio recordings was affected which caused great difficulty in the transcription process. Of the two authors who did the transcribing, one is a native Spanish speaker and the other speaks at an advanced level but was not fluent. It was therefore necessary for the native speaker to listen and edit all the transcriptions of the second author. Even with both authors transcribing, very small portions of two of the interviews were lost due to poor sound quality, however the authors felt that no meaning was lost in the content.

The broad nature of the study's aim made for a diverse spectrum of information and experiences described by the participants. While the authors felt it was necessary to investigate how physiotherapy is practiced in order to understand the physiotherapists' experience, the breadth of the inquiry made it difficult to focus on individual themes. The collected data was vast and challenged the authors to synthesize the most important themes and concepts. Several less prevalent concepts were excluded because of the challenge of relating them to other themes. The broad nature of the study's inquiry can also be seen as a strength as it allowed for the revision of questioning based on the participants' responses. Complexity about the PTs' experiences could arise from the open nature of questioning rather than speculation. Constraining the participants to one particular region could also be seen as a strength of the study, as it was a uniting factor giving greater consistency to the PTs' experiences.

Lincoln and Guba suggest four different standards to assess the trustworthiness of a qualitative study: credibility, transferability, confirmability and dependability (23). *Credibility* requires the study to be believable to readers. The authors used triangulation to enhance the credibility of the study. The interviews were conducted by both authors and then individually coded. The extracted codes were then discussed between both authors to ensure the congruence of the findings. Triangulation was also used to enhance the *confirmability* of the study. In order to ensure that the findings are the result of the experiences of the participants rather than the characteristics and preferences of the authors, one of the interviews was coded by the authors' supervisor and further discussed with the authors. This helped to confirm the findings and reduce the effect of author bias. *Transferability* refers to the applicability of findings from one context into another setting. Although the transferability of the study findings is decided by the reader, the authors do not believe this study is transferable to the rest of working physiotherapists in Ecuador, due to the small number of participants and the demographic limitation. The authors strived to systematize their analysis to increase the *dependability* of the results.

Results

The results of this study illustrate the way in which seven PTs are working in western Ecuador and many aspects of their experience. In some cases, the authors found it difficult to separate description from experience and how to present the information as they were often related. The most relevant example was in the use of equipment such as laser, ultrasound, magnet, etc. The authors speculated that the use of equipment could also have been related to high patient quantity and high workloads for PTs. As the PTs in the public sector were always treating more than one patient at a time, by using equipment they could leave the patient unattended and work with other patients simultaneously. When considering the PTs' experience of bridges and barriers to their practice, many of the themes and subthemes were distinct but very closely interwoven.

Professional Autonomy

The authors were not able to find any available literature describing the PT's experience in Ecuador or elsewhere in Latin America, however studies in other parts of the world have identified factors contributing to PT's and other health professionals experience. In a meta-analysis of factors affecting job satisfaction among nurse faculty, several predominant factors were identified; professional autonomy, leader role expectations, organizational climate, perceived role conflict and role ambiguity, leadership behaviors, and organizational characteristics (24).

Professional autonomy is an important factor in all professions and the authors are aware that the level of autonomy of the physiotherapist varies from country to country. Chanou and Sanders found in a qualitative interview study of physiotherapists in Greece that the participating PTs experienced frustration with the patient referral system which limited their autonomy and felt that it restricted the profession (25). PTs described conflict arising both with the patients, the medical institution, and the doctors as a result of the hierarchical referral system. Similar to the findings in our study, the interviewed PT's also identified patient perceptions of the PTs role as a limiting factor. In contrast, in a survey of 500 Japanese PTs regarding their role, the majority of participants felt that they were independent in their treatment methods and that little conflict arose within the medical community (26). This illustrates the importance of professional autonomy and its effect on the PT's experience.

In a systematic review examining inter-professional collaboration in primary health care, Supper et al. identified lack of knowledge of one another's roles as a primary limiting factor (27). The interviewed PTs in our study expressed a frustration that other medical professionals were not aware of their knowledge and scope of practice.

Professional hierarchy and patient perceptions were both closely related with low professional status. This can be considered as a "chicken and egg" phenomenon; it was not possible to

conclude if hierarchical attitudes in the medical community had affected patient perceptions or if they were simultaneously existing phenomena. The authors speculate that the referral system and medical dominance has had a negative impact on the status of the physiotherapy profession.

Economic and political factors

In a survey of PTs in Northern India aiming to identify factors which contribute to job satisfaction, researchers found that salary, interest in the job, and a sense of fulfillment were the strongest predictors of job satisfaction (28). Those factors that contributed to the highest level of dissatisfaction were salary and job insecurity. These results reflect those of this study and the participants' experiences regarding both barriers and bridges.

It was easy to speculate that lack of facilities, a difficult job market, and low salaries reflected on the economic status of the country as a whole and were perhaps not problems unique to physiotherapy in Ecuador. While the authors chose to consider access to continuing education as a separate theme, it can also be speculated that it is related to limiting economic and political factors.

Continuing education

It is important that healthcare practitioners are properly educated throughout their careers to effectively treat the needs of patients (29). The results of our study highlight the engagement of physiotherapists in the pursuit of higher education but they are limited by several factors including lack of availability of courses and lack of support to pursue higher education. Other studies have shown that therapists working in low-resource environments often encounter similar barriers that make access to education challenging (30, 31). Access to continuing education can even be an incentive to stay in the country. Canadian nurses working in the US identified the lack of continuing education as a disincentive to return to work in Canada (32).

Efforts to make continuing education more available are being made within Ecuador, but it is clear that even with a profession that has the desire for further learning, addressing this problem is a great challenge. An online continuing medical education course was implemented in 2013 for Latin American nephrologists, and showed potential as a more economical option for continuing education for nephrologists as well as other groups of healthcare professionals working in Latin America (33).

Professional Satisfaction

Patient relationship and comradery were strongly contributing factors to professional satisfaction among the PTs in this study. In a qualitative study among Swedish PTs reflecting on PT and patient interaction, PTs emphasized patient relationship as being important to patient outcome (34). This echoes the descriptions of the interviewed PTs in our study which named patient

relationship as both being an enjoyable aspect of their work as well as fundamental to patient treatment.

The authors felt they received congruent answers among almost all participants, however, there were some distinct contrasts in the answers of the PT who was working only with children. In general, the PT specializing in children felt greater societal and professional recognition than the other participants. This PT also had a much more positive experience of teamwork with other medical professions than the other PTs. The authors found it was difficult to represent her experiences within the chosen categories in the results because of the contrast in her answers.

CONCLUSION

The many aspects addressed in this study of physiotherapy practice and the PT's experience give a small glimpse into the current circumstances of physiotherapy among the participants in western Ecuador. While the participating PTs were faced with many challenges in their practice of physiotherapy, there was a pervasive tone of satisfaction, optimism, and inspiration for progress in the profession and for a better future. Even though the results are not transferable to physiotherapy as a whole in Ecuador, they may offer insight into the challenges being met by an enthusiastically developing profession.

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INDEX I

Interview Guide

1. What role do physiotherapists have in the rehabilitation of musculoskeletal disorders?
2. Do you follow any concept or structure when treating musculoskeletal disorders? What freedom do you have in planning treatments?
3. What kinds of treatments do you offer?
4. Which patient group do you meet the most?
5. Which patient group do you believe is mostly neglected from treatment?
6. How do you work with other healthcare professions? How do your team members contribute to your work with a patient? How does the team regard your advice?
7. Who decides when it is suitable to meet a physical therapist?
8. How are physical therapists seen by society? What status?
9. How do you feel about the salary you receive? Is it appropriate to the work you do?
10. Do you enjoy your job as a physical therapist? What do you enjoy the most about your work? The least?

INDEX II

Informed Verbal Consent Script - Translated to English from Spanish

Hello,

We are students from Lund University in Sweden conducting research for our undergraduate thesis project. The project is about physiotherapy in Ecuador and the physiotherapists experience of working with musculoskeletal disorders. If you are interested in participating, we are interviewing physiotherapists for 30-45 minutes at a place and time of your choosing. The interviews will be audio recorded. Questions are related to how the physiotherapist practices and what their experience of working is. You can choose to not answer any question or end the interview at any point. Your name and the name of the clinic will not be recorded in audio or writing and all answers will be held confidential. If you are interested, we can take your contact to send you the final report at the end of the project. Are you interested in participating and do you have any questions about the project?