



Physical Therapy in the Ponseti Treatment

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RESEARCH QUESTION

How can we find a way to incorporate physical therapy into the clubfoot treatment for the children developing countries in the most effective way which can be understood by any language and without internet access?

Problem

Children in third world countries are not getting effective physical therapy treatment needed after the Ponseti Method is performed. There are no physical therapists available in the clinics for the children. Since families travel many hours to get to the clinics, there needs to be a way for the parents to be able to have an effective exercise routine to bring home for their child.



BACKGROUND AND SIGNIFIGANCE

What is clubfoot?

- Clubfoot is a treatable condition where an individual born with their feet twisted abnormally. One out of 750 children worldwide are born with clubfoot each year.
- In western countries, clubfoot is treated immediately and therefore is rare among the general population. In the developing world, over 1 million children live with untreated clubfoot.

How does it affect children in Third World Countries?

- Approximately 80% of children with clubfoot in the developing world are untreated.
- Since these individuals are unable to walk properly, this leads to high rates of physical and sexual abuse, neglect, blame, stigma, decreased family income, and lifelong poverty. Children born with clubfoot in the developing world will usually be thrown out on the street or hidden in the back of the house because they are "useless" and they are an embarrassment to the family.
- This lack of treatment creates an injustice because as treatment is based solely on the fact that these individuals cannot afford it. Untreated individuals are unable to work and become a burden on the community.

How it is treated:

- The Ponseti method is a cost effective and overall more effective way to cure clubfoot as opposed to a surgical method, which some of the time does not work and can have bad effects later
- In 90% of the cases in the US they use the Ponseti Method
- MiracleFeet is a non-profit that has brought down the cost of treatment down to \$250 by doing 3 things.
 - First thing: They used the Ponseti method
 - Second thing: together with the design school at Stanford they created a brace that costs \$17 and is easier to use than traditional braces that costs \$380
 - Third thing: They created a model where they train doctors in existing clinics to perform the treatment which lowers the overall cost and enables local clinics to treat children

RESEARCH METHODOLOGIES

1. This project was applied research, qualitative information and hybrid methodology
2. I collected my data by reading different journal articles and conducting an interview with the program manager from Nicaragua

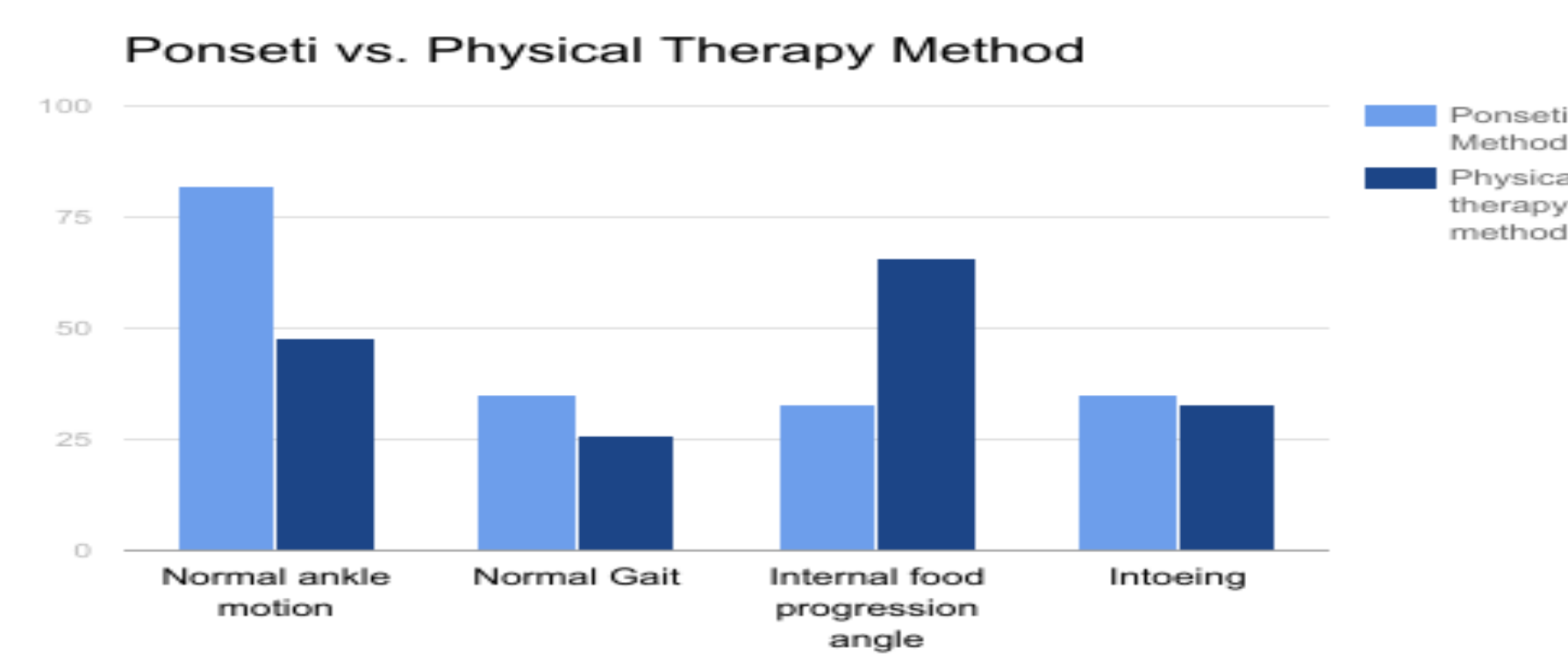
Interview questions:

Is there an opportunity to improve physical therapy treatments after the Ponseti method the child goes through? What are the need for physical therapy after?

What about the approach today works well? What can be improved?

How do you communicate with the families or how do you make sure the parents are doing the things for the child?

What would be your idea if you had to develop curriculum after the treatment?



DATA ANALYSIS AND RESULTS

Results from interview:

- It is recommend to perform physical therapy exercises at home, however this is rarely the practice
- Doctors provide parents with instructions for physical therapy to guide their children through the physical therapy

What about the approach today works well? What can be improved?

- Works: It works with the families, once they do the therapy and if the parents do it
- Improved: If there was a therapist at the hospital to educate the parents about the therapy and demonstrate for them and they live far

How do you communicate with the families or how do you make sure the parents are exercising with their child?

- Text messaging and phone calls can assist
- Doctor's can course correct any errors in home exercises during visits

What would be your idea if you had to develop curriculum after the treatment?

- Communication- parents change their phone number a lot

SOLUTION

The solution to this issue is to make pamphlets with the different exercises for post-Ponseti treatment. This way it is accessible to all and no internet is required. These pamphlets should be given to every patient after the Ponseti treatment is preformed. There should also be a way to check in with the patient after about six months to one year after surgery and make sure the patient is keeping up with their exercises after a period of time

NEXT STEPS

My nexts steps will be :

- Putting in the physical therapy program
- Making pamphlets that can be understood in the different languages
- Finding the most cost effective way to get the pamphlets to the different clinics
- Do a test run in one country /clinic first

ACKNOWLEDGEMENTS / REFERENCES

Special thanks to Todd Norwood, Natalia Siegel and Ms. Angell for making this project possible

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