To begin thinking about writing a paper on deafness in Spain, I started my research by trying to find out the number of deaf and hard of hearing people living there, which seemed like an earnest request. This proved to be more difficult than I thought. In one study, I found that the number of deaf people in Spain is estimated to be around 1 million (Jáudenes). I say estimate because it is hard to say exactly how many because many people have doubts about registering with the government for numerous reasons including; they don’t want to be seen as disabled, they aren’t familiar with the benefits and legal advantages, or they fear of not getting a job (Sheikh, 2007). In another site I found that 1 in every 1000 children are born with bilateral profound deafness and 5 of every 1000 are born with other types of deafness, this equals out to be about 2000 new cases at birth each year, 95% of these newborns have hearing parents (Jáudenes). However, this statistic is not representative of those that lose their hearing due to illness early in life or those with hearing loss related to old age. With all the trouble I encountered trying to find this one basic statistic, I reasoned that there must be some negative stigmas and attitudes towards these persons. What I found proved to be the opposite in today’s time. With increasing levels of new technologies and public awareness, I found that attitudes toward the deaf and hard of hearing are significantly more positive than they were in the past. Through educational, medical, and social lenses I will evaluate how attitudes towards this classification of people have changed and why.

It is important to not use such a wide brush to paint the whole of the deaf community, and note that there are many identities that deaf people can associate with. In Spain, as with elsewhere in the world, we can see three distinct subgroups of deaf people. There are those that
have a strong deaf identity; usually these are people that are born into deaf families and use sign language as their only or primary form of communication. The second subgroup is comprised of people who don’t see themselves as culturally distinct from hearing people; members of this group receive oral language education and are proficient in lip reading. Members of this group are ones who refuse to receive public or government support. The third subgroup is a mix of the two other subgroups, they recognize that they are sometimes limited in daily tasks, but they may also participate in deaf associations (López-González, Vicente, 2013). In this paper, I will be focusing on the second subgroup as it is most representative of those in Spain. I say this because throughout my research I have seen strong messages of the belief that people with this disability consider that they are not limited, and can do anything they put their minds to. In fact, in a TEDx video a woman with hearing loss asked the following riddle “What is the difference between a deaf and hearing person?” the answer to this is “a battery.” (Sindell). This riddle further contributes to the idea that new technologies have placed people with this “disability” on a level playing field with those who have regular hearing resulting in increased positive attitudes.

**History of Deaf Education in Spain:**

To describe how things have changed we first must look at education in the past. Deaf education in Spain began in 1520 with Pedro Ponce de León; he was the first teacher of deaf children. Although not much is known about his methodology, we do know that he worked mostly with the royal children, and there was no education for the rest of the deaf community (Sheikh, 2007). In 1593, there was the first appearance of a manual alphabet in a book by Melchor de Yebra, called Refugium Infirmorum (Sheikh, 2007). In the early 19th century, a number of schools were set up for the deaf on the basis of “incorporating them into humanity and to allow for salvation” (Pilar Fernández-Viader, Fuentes, 2004).In the late 19th century,
Spaniards rejected the idea of sign language as a language, calling it “mimicry”, leaving deaf people without a language or a way to communicate (Pilar Fernández-Viader, Fuentes, 2004). In 1880, the biggest change occurred for education with the Milan Congress; they put in place the teaching method of oralism (López-González, Vicente, 2013).

Oralism had huge, devastating effects for the deaf community. Oralism was the idea of a monolingual, spoken approach, meaning that the use of sign language was forbidden (López-González, Vicente, 2013). For people that cannot hear, the only option for them to learn was lip reading, which was not widely known. Education then became a medical matter as they tried to incorporate speech and oral therapy for these students during the school day. The down side of this is that a great deal of time that should have been devoted to learning what was on the syllabus was devoted to voice production and pronunciation. This lack of education led to a huge increase in illiteracy rates and unemployment for these people (Pilar Fernández-Viader, Fuentes, 2004). Oralism was the teaching strategy for most of the 20th century until we saw a switch to bilingualism (López-González, Vicente, 2013). It isn’t until 1982 that we saw a law passed saying it was the right of disabled students to study in ordinary schools and receive equal opportunities (Pilar Fernández-Viader, Fuentes, 2004). This law is important because it marked the shift in thinking that the school should adapt, and stop thinking of the child as a problem. We further saw this becoming the norm with 20th-century laws that ensure free elementary schooling for every child, regardless of their socio-economic situation or disability (Pilar Fernández-Viader, Fuentes, 2004).

By looking at the history of deaf education, we can see how attitudes have changed over time with more social awareness. In the earliest stages, the first teacher only taught royal children showing us that there was not a lot of care or awareness of the deaf community and their
needs. The creation of a manual alphabet did show recognition of the deaf community needs, but during this time the widely held belief was that they would be unable to speak or write. The next era in which we can infer a change in attitude is in the early 19th century, when education was for the purpose of salvation and incorporation into humanity. Historically, we identify Spain as a very religious country and can understand the viewpoint of education for salvation. However, because they included the idea of integrating the deaf people into humanity, we can see how lowly the society thought of the deaf population during this time. The idea of incorporating the group into humanity assumes that they had a subordinate position compared with the average human being. Later in the 19th century the misunderstanding of sign language as mimicry, instead of a communication method, gives us the sense of how little people knew about this group of people and the inadequate amount of effort that went into understanding their culture. The first time we saw medical professionals get involved is during the period of oralism in schools. The professionals provided what was thought of a constructive way of solving the difficulties that the deaf endured, but actually stunted their ability to learn. The last shift in attitude was with the equal opportunity law in 1982 and the free elementary schooling law, which ensures that the student doesn’t care the burden any longer, and it forces the school system to make conscious efforts to understand deaf persons and their needs. This shift of deliberately providing equal opportunities continues today.

**Education today**

In Spain, over 90% of the people with hearing loss use oral language and 6-8% use sign language (Jáudenes). Just as with oral language there are various forms of sign language; including a form of Catalan, "Llengua de Signes Catalana" (LSC) and a form of Spanish, "Lengua de signos Española" (LSE). This is important to note as in Spain over 50% of adults are
bilingual or multilingual, and the percentage of children in bilingual education ranges from 68 to 100% depending on the autonomy. However, in a study of 71 deaf and hard of hearing parents over 70% said that their children “are capable of becoming orally bilingual and that learning a second language would not confuse them or overtax the language system” (Guiberson). However, only 38% of these parents chose to raise their children bilingual (Guiberson).

Bilingualism projects started relatively recently, as in 2001, Madrid and Catalonia introduced schools starting at the kindergarten level, where there was a parallel teaching of sign language and oralist teaching (Pilar Fernández-Viader, Fuentes, 2004). This method has proved to be most effective for those with severe hearing loss.

In law 51 of 2003, we saw the establishment of a law that granted equal opportunity and nondiscrimination, as well as universal accessibility for people with disabilities. The effects of this law have provided for standardization of mainstreaming abilities for deaf children. In organic law 2 of 2006, the government further reinforced the idea of standardization by saying that educational training should be an ongoing process (Jáudenes). Training has proved to be challenging because of all the new technologies that persons with hearing loss have the opportunity to use. Teachers often become overwhelmed with the amount of special attention they need to devote to make sure the technologies function correctly (D. Sindell, personal communication, November 17, 2014). However, it can be seen that these technologies are what have proved to be most effective in mainstreaming these children into not only bilingual schools that use sign language, but a variety of languages.

In 2008, there were 7,305 students with hearing impairments that attended standard school centers, while only 799 attended classes at special education centers (López-González, Vicente, 2013). In a study shown in the book titled *Bilingualism and Bilingual Deaf Education*
we can see that normal hearing students generally accepted the deaf and hard of hearing students (Yiu, Tang, 2014). I believe these statistics about the amount of people that chose regular schools for their children, and the attitudes of regular students, show how technology has initiated positive thinking about this group.

For deaf and hard of hearing children, there are a few choices of what type of school to send your child to. As seen above there are special education schools; these are dropping in number as the current education trend is to mainstream the children into the other three types of schooling available here in Spain. In my interviews, I had the chance to discuss the options of private, public, and the government-funded private schools with two parents of children with hearing loss.

In my first interview, the parent chose to send her child to a government-funded private school. She told me that there are one or two spots in every classroom for any child with a special need. This is helpful for her family because a group that evaluates deaf needs will come to evaluate what the school will need to provide for her child. Examples of things the school could provide are; a magnetic loop, an FM system, or speech therapist (Garcia-Delgado, personal communication, November 12, 2014). The second family I interviewed sends their child to a private school. She informed me that the schools will not always provide the same resources; it often depends on what the school has already. I also absorbed that it often can be difficult for a child with hearing loss to get into one of these schools if the school hasn’t had a child with the same needs before. A friend, of the family I interviewed with, needed to provide information from the doctors and even a letter of recommendation from another private school that explained they believed this child could succeed based on the experiences they’ve had with a child in their program (D. Sindell, personal communication, November 17, 2014). When I asked why people
select the private schools over the others even with the amount of stress that can come with it she responded that, in the situations like government funded schools, the children are singled out as different, and in the private schools no one even has to know about his hearing loss. It seems the other family had this worry as well, “I think the biggest obstacle for Maria* will be as she gets older and others will think she’s different, and she won’t want to wear her hearing aids anymore” (Garcia-Delgado, personal communication, November 12, 2014). I feel that it is significant to note that the families don't fear of a lack of education or maltreatment of their children, but more of how other children react. Even though the families are implying that children will not accept their children, it is more of because they are different, a factor that can apply to many things, rather than solely the fact of their child’s deafness.

**Technologies:**

Spain has come a long way in providing auditory prosthetics for those with hearing loss. Hearing aids and cochlear implants have changed the way of life for these people. Hearing aids are smaller in-ear devices that allow for the amplification of sound frequencies, to aid in making sounds such as the human voice intelligible for those with hearing loss (López-González, Vicente, 2013). People with hearing aids can also use them as sort of a blue tooth device for their cellphone, as well as to receive emissions from FM systems (D. Sindell, personal communication, November 17, 2014). An FM system is a kind of microphone that sends the amplified sound directly to the hearing aid. This can be quite helpful in classrooms because it cuts down on all the additional noise that is present in the room. Another technology that can be helpful for those with hearing aids is a magnetic loop. A magnetic loop system operates by surrounding a space with a wire, which causes sound signals from television, speakers,
microphones or other sources, to become magnetic so the hearing aid can pick the sound up with better quality (Jáudenes).

An alternative to the hearing aid is an auditory prosthetic called a cochlear implant. Cochlear implants are surgically implanted to electrically stimulate the auditory nerve. This option is for people that have a severe or profound hearing loss, who would not fare well with hearing aids. Cochlear implants are relatively new to Spain, with around 9,000 people being implanted with the device, compared to 90,000 in the US (D. Sindell, personal communication, November 17, 2014). The use of this device has been changing rapidly though as we can see in this data from a study done by comparing children under 18 to those over 20 years old. In children 18 and younger we see that 100 percent receive auditory prosthetics, 57% receive hearing aids, and 43% receive cochlear implants. In persons older than 20 we see that only 68.4% wear an auditory prosthetic with, 86.6 percent being hearing aids and 9% with cochlear implants (Jáudenes).

In addition to these prosthetics, there are other computer technologies that can be helpful for those with hearing loss. One of these technologies is speech recognition software which can be used for vocal training. The computer allows the user to see their vocal emissions, including the intensity and frequency, the idea is that by seeing their emission they will be able to correct vocal errors (Jáudenes). A second technology is a computer avatar that can “generate sign language messages from written text and voice” the company says that the next step will be to design a tool to transmit “paralinguistic elements” such as tone, speed and intensity (López-Colino, Colás, 2012).

**Health care:**
In understanding attitudes towards deaf people, it can be significant to look at the implications of hearing loss. One of the main repercussions is the lack of access to spoken language in the first years of life. This can affect many other areas of education like linguistic competence, reading, and memory processes. Many people believe that literacy is the key to removing the barriers between deaf and regular hearing people (Jáudenes). From preceding research, it has been shown that there is a critical period of development between birth and age 3 or 4 when the brain has the most plasticity (Guiberson). I believe this is why in the past few years there has been a huge push for prevention and early intervention in the health care system.

One of the first measures that were put into place for early intervention is neonatal screening. This is a head turn test that is done at the time birth to identify any potential hearing problems. The results of the exam are solely pass or fail. In one of my interviews, I talked with the mother about her experience with this test. In Marias case the exam presented the result of an error, this not uncommon as there often lots of mucus from the birthing process that can interfere with the results. After 4 months the head turn test will no longer work, and because of communication barriers with young children, they had to complete an electrode exam to see if the specific cerebral regions responded to sound stimuli (Garcia-Delgado, personal communication, November 12, 2014). The next measure is placing the child with auditory prosthetics, and working on rehabilitation techniques. Speech therapy is one of the rehabilitation techniques that are becoming more popular, in the study produced for the Ministry of Education in Spain, we see that 95.7% children under 18 receive speech therapy compared to the 63% of people over 20 (Jáudenes). This is imperative because increased communication skills allow for more doors to be opened and more positive attitudes towards the deaf community. A figure that shows how much improvement these early intervention measures has provided is that for
children under 18, 89.6% use oral tongue compared to 63% of persons over 20 (Jáudenes). The ability to communicate effectively plays a huge role in quality of life for this population.

I was fortunate enough to sit in on a speech therapy session and an audiology appointment. It was a great experience to sit in and observe how the appointments work here and ask a few questions about the health care system. It was interesting to learn that audiologists in Spain are similar to a technical position in the United States, and to become one you just take a few classes and become certified. For this reason, many patients do not have the same type of caring and close relationships with their audiologist as they would in the United States. I did see the way that the audiologist team knew their product and how to ensure Maria’s experience is the best that it can be. Fascinating to me as well is that speech therapy, like many other parts of the health care system in Spain, can be private or public, and in some cases included in your "audiology package". I was rather impressed with the mechanisms in which the speech therapist worked with Maria, and the advice she gave me in working on her English. Both the audiologist and speech therapist had optimistic views for Maria’s future, and that she would not have limitations that significantly affect her life. Those in the medical field have confidence that people with these “disabilities” will be able to achieve whatever they put their mind to with the help of technology.

**Public Support:**

It seems as if there has been a positive correlation between public awareness about this disability and public support. For example, the government finances subsidies of varying amounts, depending on the autonomy, for children under 16, to mitigate the cost of hearing aids. Similarly, the healthcare system will cover the cost one cochlear implant. Although an interview
subject of mine can be quoted saying “two implants are much better than one” the assistance society is giving in providing children with auditory prosthetics is a huge step in the right direction since the prosthetics make a day and night difference in the lives of deaf people. We also see the emergence of laws like this one passed in 2003, that families of deaf children can have the opportunity to learn sign language with a certain amount of economic support from the government (Pilar Fernández-Viader, Fuentes, 2004). We can also see that groups like ONCE have been providing support to the deaf community since 1939 (López-González, Vicente, 2013). In addition, there are a number of deaf organizations that play a role in support. Some of these associations can; help facilitate and represent them at public offices, supply study grants, provide economic support for hearing aids, assist with adjustments in the home, or aid in finding jobs (López-González, Vicente, 2013).

Spain also has provided a number of systems that help improve social accessibility. One of these is the ability to use the “t-setting” in museums, airports, and movie theaters. The t-setting allows for amplification of the sound in hearing aids. Recently, laws such as “Ley de Cine” have offered grants to films that use audio descriptioning, which are subtitles with paralinguistic elements (Utray, 2009).

One organization that I’d like to recognize for their support of deaf and hard of hearing children and their families is T-Oigo. T-Oigo is an online portal that provides helpful documentation for the families, recommendations of professionals, and an outlet to share personal stories for inspiration. This organization has special significance to me as I have been volunteering in their program called “Allies in English”. This program matches a native English speaker with a child that has hearing loss to help them learn English through playing. I think the fact that a program such as this exists, shows just how much attitudes toward deafness has
changed; in the past it was thought that deaf people could not communicate, and now people believe that they can achieve bilingualism or even multilingualism.

In conclusion, with increasing public awareness and new technologies, societal attitudes towards deaf and hard of hearing people have become considerably more positive and supportive. In the educational lens it has been easy to see that attitudes have developed over time to include deaf children in mainstream regular schools, with the help of technology. Through the medical lens, we can understand that as audiologists and speech therapists become more aware of how to help people with a hearing disability, their attitudes towards their future have become increasingly more optimistic. Finally, through the social lens, we can see that in the past years with the help of new technologies like the magnetic loop, there is far more social accessibility, as well as deaf organizations that can help further integrate these people into society.

*Names have been changed*
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