



Research Article

© 2018 Edo Sherifi.
This is an open access article licensed under the Creative Commons
Attribution-NonCommercial-NoDerivs License
(<http://creativecommons.org/licenses/by-nc-nd/3.0/>).

Therapies and Treatment for Children with Autism Spectrum Disorder: (Case Study)

Dr. Edo Sherifi

"Wisdom" University College,
Tirana, Albania

Doi: 10.2478/mjss-2018-0171

Abstract

Autism Spectrum Disorder (ASD) is a pervasive neurodevelopmental disorder characterized by impairments in social communication and restricted, repetitive patterns of behavior, interests or activities (American Psychiatric Association, 1994) (APA). Case Study of autistic child D.S. treated with (IEP) program and therapeutic methods. Direct observation of the vertical grid with the child treated with (IEP) program and professional techniques was used for the realization of the study, semi-structured interviews with actors and factors that have access to autistic children. Focus group with field specialists who create a multidisciplinary team. Child testing with the SON-R test proved that the age of the trained child increased 4 years. The non-exercising child's mental age increased only 7 months (2.5-3.2) years. Achievements of an autistic child treated with the Individualized Education Program, (IEP-1+IEP-2+IEP-3 in the spheres exercised: The child has made progress in the psychomotor skills (learning). Results: (IEP-1-15%); (IEP-2-45%); (IEP-3-80%). Linguistic skills has not progressed, because it has serious brain damage in the part of communicative ability; the results in this sphere are: IEP-1-0%; IEP-2-5%; IEP-3-10%. The achievements of the child in the social sphere are: IEP-1-35%; IEP-2-45%; IEP-3-75%. Psychological treatment of autistic child with Individualized Education Program (IEP) and therapeutic methods resulted in success story.

Keywords: Autism, treatment, rehabilitation, programs, methods, psychological service

1. Introduction

After a long experience in teaching in 1998, I became acquainted with a new experience in the Child Development Center in Tirana, the position of the manager, but also the psychologist of center. I was before a double challenge: to manage the Center and to design Individualized Education Programs (IEP) for the treatment and training of children with different abilities. For the implementation of the programs, a multidisciplinary group of developmental therapists, social workers, speech therapists, ergotherapists, physiotherapists and occupationalists was created.

In order to make the programs accessible an approach to contemporary theories as well as knowledge of experiences in residential centers in Europe was needed. A study visit to the one-century center in Budapest served this. I had to update the programs every year, enriching them with professional information and adapting tools and methods to those applied in the Western world in this field. Training by specialist of "ASED", the English foundation led by the psychomotrician Anna Rohen, and by the specialist of "Handicap International", was for me and for all the staff an impressive work experience.

The passion and the desire to do the best for the treatment of children with Autism spectrum disorders (ASD), children with Down syndrome and children with intellectual disabilities, motivated me to undertake the in-depth studies for the Doctorate degree in science, focusing on the

effectiveness of the Individual Education (IEP), for the rehabilitation of children with Autism spectrum disorders (ASD), children with Down syndrome and children with intellectual disabilities.

By decision of the State Commission on State Social Service, in 2012, the child D. S came to the center, who was diagnosed with autism spectrum disorder from the pedopsychiatrist. D.S was subjected to a weekly consultant in the multidisciplinary team, who evaluated his psychosocial condition.

The psychological treatment of D.S with Individual Education Programs (IEP) continued for several years and was successful. I decided to publish this case study, describing the treatment process and enabling the training and improvement of the autistic child D.S. to share this experience with all those who are interested in this problem.

2. Literature Review

Autism is a complex developmental disorder that affects the individual's skills in the areas of social communication. It is characterized by impairments in communication, social interaction, interests, activities, repetitive and stereotypical patterns of behavior (American Psychiatric Association. APA.1994)

Autism is a physical disorder of the brain that becomes the cause of a limited developmental abilities. Numerous autism symptoms can be manifested Numerous autism symptoms can manifest itself or in combination with other health conditions such as delayed mental development, blindness, deafness and epilepsy or in combination with other health conditions such as delayed mental development, blindness, deafness and epilepsy. Michael D.Powers (2000).

The Causes of Autism. Brain abnormalities.

An important technological development, known as Functional Magnetic Resonance (MRI), actually makes it possible for scholars to observe the different brain areas of the children, which "revive" when activated while performing the relevant tasks. This research has just started, but the first studies show that, in order to understand what others think or understand the facial expressions of others, children with ASD use different brain areas than those used by children with normal development. (*Debora Fein & Michel Dunn, 2007*).

Another study: "Identifying new genes that affect autism and Asperger's syndrome", was conducted in 2013. It identified in two families, mutations combined with two genes located on chromosome X affecting the formation of synapses. A mutation appears in the neurologene gene 4 (NLGN4). There were two boys in a family, one with autism spectrum disorder and the other with asperger syndrome. This mutation has been transmitted by the mother. NLGN4 gene mutation affects the formation of a protein, which affects the formation of synapses during brain development

The researchers also identified the genes of Fragile X syndrome and Rett, NLGN3, NLGN4, ARX, CDKL5 and SLC6A8 syndromes. At the same time it is thought that the syndrome is also influenced by the environmental factors. So the child is born normal but becomes autistic. Experts estimate that there may be 10-50 genes, localized in X chromosome, that affect the manifestation of autism. Researchers have observed that the major cause of autism is a chromosome X gene. Mutations in many chromosome X genes are the cause of autism or mental retardation. (*Beytien, A. 2011*).

The hypothetical causes of autism influenced by the environment are: infection from metabolic disorder, maternal age over 35, and paternal age over 45, carbonated foods, gluten meals, poisons, chemical substances and triple vaccines used against measles, rubeola and salmonella.

Studies point out that incidents occurring during pregnancy or childbirth are a more common history of autistic children than of others. These incidents are thought to play a role in the development of this disorder. In some cases there is a strong link between autistic disorders and genetic influences such as phenylketonuria, tuberous sclerosis, neurofibromatosis, fragile X. (*Lynnan Cohen Brennan. 2010*)

The body of an autistic does not excrete the excessive mercury, and consequently causes the developmental disorder. It has long been said that autism is caused by "cold mothers" and mothers in careers, which do not give children enough love and care. This theory has been rejected. Numerous studies have been conducted and continue to be carried out to find problematic genes

and some areas of the brain that do not function normally. (Saqellari.S. 2015).

Neurosciences are going deeper in the identification of the biological nature of autism causes. Hypotheses on the genetic origin have a more solid basis and are supported by many scholars. The nature of an autistic child's DNA leads to the conclusion that autism traces can be coded in its chain, which is supported by the fact that typical genetic concerns are also noticed in children suffering from hereditary diseases, such as phenylketonuria (PKU), neurofibromatosis, etc. (Dhamo.M.(2010).

3. Methodology

The objective of the study is to substantiate the hypothesis of the study: "The Usage of Professional Therapeutic Programs and Methods, helps in autistic child training."

Study Limits. I think the study has the following limits: a. The reduced number of samples; b. The number of institutions where autistic children are diagnosed.

Individual Education Programs (IEP) were part of the therapies used for the treatment of D.S.

From 2002 to 2016, together with the multidisciplinary center group, we implemented child rehab programs in 8 areas of development such as: Self-service training; Language skills; Physical training; Social training; Emotional training; Professional training; Practical training; Academic Skills.

Like autistic children, D.S also had deficits in speech ability, interactive skills and manifested repeated, stereotyped behavior. According to the evaluation of the psychosocial needs of D.S, the group directed for the treatment of D.S.: Language training program, to develop the speech ability, provided by the logopedist; Social training program, to increase interaction and socialization with peers, provided by the social worker; Physical training program, for the development of fine and global motion, and coordination ability, provided by the physiotherapist;

Emotional training program, for aggressive level management, reduction of hyperactivity and minimization of stereotypical behaviors. Developmental staff and social worker are involved with dedication to the emotional treatment of D.S. Practical training program, to exercise the fine motion, where the ergotherapist, occupational therapist and developmental therapists, would treat D.S, in the pottery and pyrography.

The format of each program contained: Twenty sections with relevant topics; Five levels of Likert scale, (Not at all; Physical help; Verbal help; Partially; Fully). The didactic tools that would be used to concretize each concept; the methods that would be used by the specialist applying the respective therapy; the notes that the specialist or developmental therapist would carry at the end of each session to track progress or regression of the child.

Individual Education Programs (PEI-1); (PEI-2); (PEI-3). Apply each one of an academic year. From 2015 to 2018. The format of each PEI contains: The didactic tools, to be used for the concretization of each concept; Methods to be used by the application specialist of the respective therapy; And the column of notes that the specialist or developmental therapist would keep at the end of each session to track the progress or regression of the child he was treating. Each session lasts 45 'and is organized with 4 stages 10' having 5 'breaks after the second stage of child treatment.

The following methods were used in the psychological treatment process of D.S:

Floortime. Floor Therapy. This form of therapy has been developed by psychiatrist Stanley Greenspan for children. It is called Floortime or floor therapy because the therapist or parent sits on the floor with the child to interact and influence positively at the child's level of development. Logopedists and developmental therapists have used this method to train D.S to interact with other autistic and non-autistic children. For the treatment of DS, therapists in co-operation with parents followed the principle that DS could enhance and build a broader range of interactions with an adult who puts himself at the same level of development with DS and they worked to reinforce his strengths. (Greenspan, I.Stanley. 2009)

Relationship Development Intervention (RDI).(Steven,Gutstein & Rachelle K Sheely, 2002)

This therapy created by Steven Gutstein focuses on improving the quality of life in a long period of time. The social worker, and the developmental therapists, applied this intervention program for the development of social relations of D.S. This treatment was focused on the key

issues of D.S., such as having friends, being empathetic, expressing love, and being able to share experiences with others.

Therapy of Sensory Integration. Sensory integration is the process in which the brain gets organized and interprets external stimuli such as movements, touch, smell, sight and hearing. The purpose of sensory integration therapy is to help the child develop the ability of the nervous system to process sensorial input as naturally as possible. Lamula Verkysto Salgado (2018). Through integration, the brain collects sensory messages and forms the right information on how to act. This form of therapy includes neurosensory and neuromotory exercises to improve brain ability to self-improvement. (Cort, Rebecca & Sapir, Selma. 2016). Psychologist, physiotherapist and ergotherapist used this therapy to improve attention, concentration, listening, comprehension, balance, coordination and control impulsivity in D.S.

Logotherapy or speech therapy. Communication problems of children with autism are of varying degrees and depend on the intellectual and social development of the individual. Before starting the treatment of D.S, the logopedist assessed the development of the spoken language. It was noted from the screening that Drini had difficulties in using the spoken language.

It was found that Drini has difficulties in pronunciation, in the pragmatic use of the spoken language, which means that he does not know what to say, how to say, when to say it, in order to socially interact with other people.

The purpose of logotherapy was to improve Drini's useful communication. Despite intensive therapies, verbal communication resulted to be an impossible objective. Communicating through gestures, figures, and drawing resulted to be the only possible form of communication. (Thomas Hodge 2014).

TEACCH. (Treatment and education of autistic and related communication handicapped children). It's a program developed by psychologist Eric Schopler in 1960.

This program was implemented by the Developmental Therapist and the Logopedist for Drini training and education in order to improve the level of communicative disabilities. TEACCH is a special education program that was applied according to the individual needs of Drini. The TEACCH program was used to enable Drini improve his social and communicative skills. (Eric Schopler. 2004).

Musical Therapy. One of the most commonly used methods of music therapy is the R.O.C.K method. (Christine Korb.2014). This method was used by a dancer-therapist training Drini through aerobics accompanied by background music.

ABA (Applied Behavioral Analysis). Behavioral analysis is a natural science of behavior, described for the first time by Skinner in the 1930s. By the early 60s, hundreds of behavioral analysts have intensively used this method. Developmental therapists applied in Drini the positive reinforcement (ABA method instrument) and other principles to build communicative, playing, social, academic, self-care, working and community living abilities, and to reduce the problems with hyperactivity and aggressive behavior in some cases. (Barbera, Mary & Rasmussen Tracy. 2017).

Picture Exchange Communication System (PECS). PECS was created in the year 1980 by Lori Frost and Andrew Bondy. (Lori Frost & Andrew Bondy.2002). During periodical testing of D.S, the experts concluded that he could not communicate verbally due to the deep physiological impairment of the respective brain area of speech ability. Therefore, the PECS method was used in order to help D.S in enhancing functional communicative skills.

The application of the above methods resulted in increased cognitive, coordinating and fine motion skills of D.S, ascertained by the quality drawings of D.S under the care of developmental therapists. These were just the beginnings of D.S's talent in painting. After ending the programs, D.S is now dedicated to the art of painting.

Under the extraordinary care of his mother, Edlira, D.S evidently displayed his talent in painting, by creating innumerable Van Gog style paintings using the technique of modeling. D.S compensates his disabilities in the field of verbal communication through the painting, which is a communication possibility to him. Thanks to the dedication of Edlira, D.S has today his own painting studio. He continues taking lessons in painting at Liceu "Jordan Misja" (school of arts).

4. Results

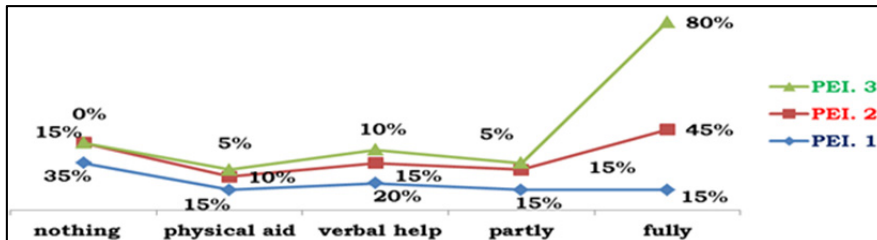
4.1 Authentic Children Trained with Individualized Education Programs (IEP)



Graph No. 1: Graphic presentation of the D.S. child's mental age. Evaluation carried out through the SON-R test.

It turned out that D.S's mental age, as a result of the IEP application and professional techniques, grew naturally 4 years. From 2.5 years old to 6.5 years old.

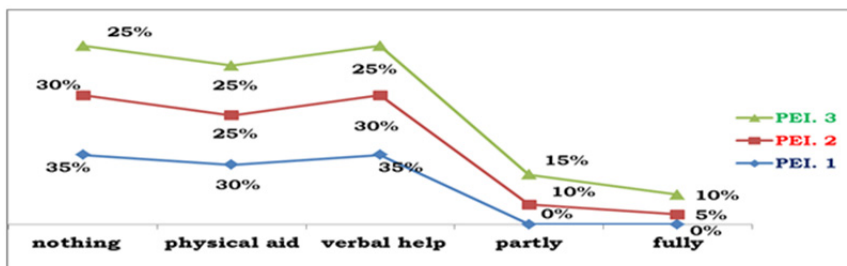
Hypothesis. No. 1: Did the D.S progress, in psychiatric training being addressed by PEI (2015-2018)?



Graph No. 2: Graphic presentation of the D.S. child. Psychomotor skills

Graphic presentation of the section indicates that D.S child with autism disorders, through the application of Individualized Education Programs (IEP 1 + 2 + 3), improved the fine motor skills and managed to be able to realize very impressive drawings and paintings. Finding this rubric at full level is: (IEP-1-15%), (IEP-2-45%), (IEP-3-80%).

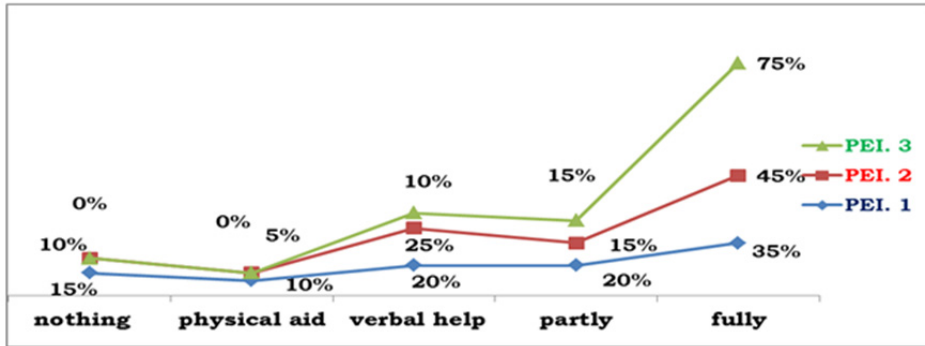
Hypothesis. No.2. Does the D.S progress in language training by addressing PEI (2015-2018)?



Graph No.3: Graphic presentation of the D.S. child. Language skills

The graphical presentation of the section shows that the child: DS, with autism disorders, did not progress very much in the field of communication. D.S, managed to acquire IEP-3 linguistic 25% with verbal help, 15% part and only 10% at the Fully Likert-Type Scale level, because it has severe brain damage in the part of communicative ability. Hypothesis. 2 - not verified

Hypothesis.No.3: Did the D.S progress, in social training by addressing PEI(2015-2018)?

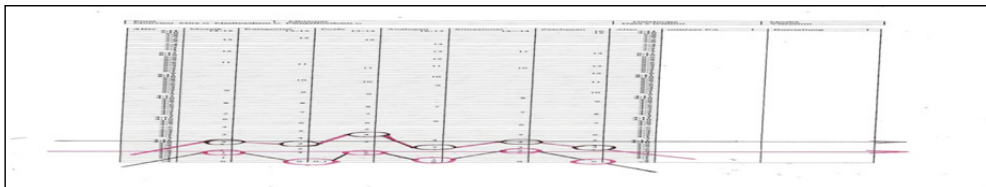


Graph No. 4: Graphic presentation of the D.S. child. Social Skills

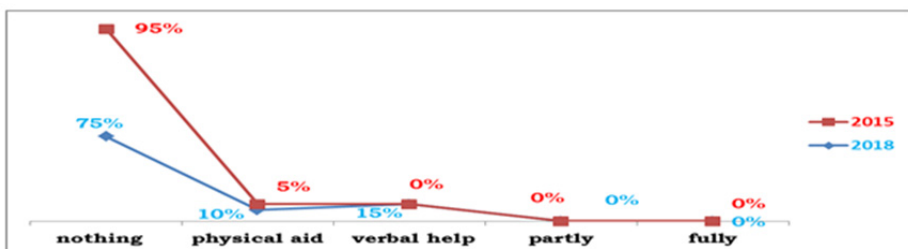
Findings of the section. After application of individual education program (IEP 1) the child's training increased 35%. After application of (IEP-2), the child was able to communicate fully 45%. At the end of the IEP-3 individual education program, the child's social skills increased 75%. The hypothesis is verified

4.2 Control group. Autistic Children Untrained with Individualized Education Programs (IEP)

Testing was done with the Griffith Test and it turned out that the KK's mental age grew naturally only 7 months. From 2.5 years to 3.2 years.

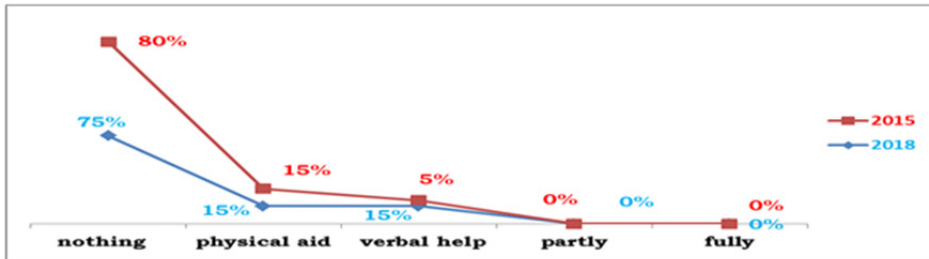


Graph No. 5: Graphic presentation of the K.K child's mental age



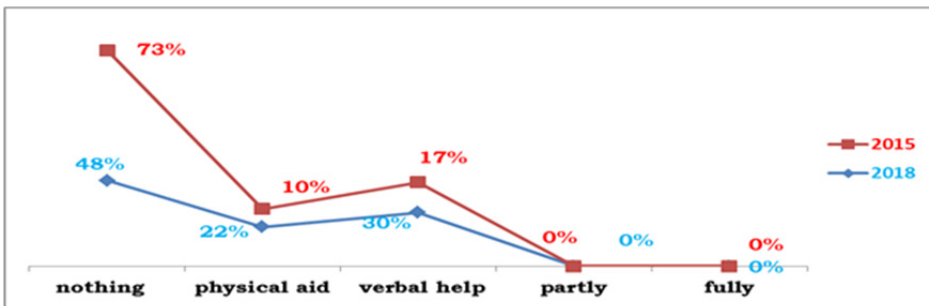
Graph No. 6: Graphic presentation of the K.K. child. Convivial skills

Graphic presentation of the KK child's social skills of the control group shows that in 2015 social skills is 95% at the "none" level. In 2018, the KK child's social skills was untrained with programs.



Graph No.7: Graphic representation of the K.K. child. Social Skills

Graphic presentation of the KK child's language skills of the control group shows that in 2015 social skills are 80% at the "none" level. In 2018, KK child language skills, untrained with programs, results in 70% at the "none" level and 0% at "partialy" and "completely" levels.



Graph No. 8: Graphic presentation of the K.K. child. Language skills

Graphic presentation of the KK child's language skills of the control group shows that in 2015 language skills are 73% at the "none" level. In 2018, KK child language skills, untrained with programs, results in 48% at the "none" level and 0% at "partialy" and "completely" levels. The survey of the graph shows that if the autistic child is not exercised with Individual Education Programs (PEI), the child's rehabilitation is very slow.

5. Conclusions

Individualized Education Programs, (IEP), accelerate the psychosocial and psychophysical development of children with autism. Treatment and rehabilitation of children with autism spectrum disorders, with professional techniques and methods, is difficult but not impossible. Psychological treatment of D.S with Individualized Education Programs (IEP) argued the acceleration of the mental progress and fine motor of D.S, which enabled the development of his talent in the realization of quality paintings.

Experts think that D.S has been affected by Savant syndrome, so it is thought that there is an "island of genius" expressed in his talent in painting. I think the support of all decision-makers factors, media and business is required, so that his talent can be manifested in all dimensions, because D.S, with his talent, is a success story that challenges autism.

References

- Beytien, A. (2011). *Autism Every Day: Over 150 Strategies Lived and Learned by a Professional Autism Consultant with 3 Sons on the Spectrum*. Arlington, Texas: Future Horizons. Pg.34-52;56-71;140-169.
- Fein, D. & Dunn, M. (2007). *Autism in your class*. Tirana, Albania: "Domenick Scaglione", ILAR. Pg.3-10; 102; 145; 168;233.
- Dhamo, M. (2010). *Çrregullimet dhe Terapitë e të folurit*. Tirana, Albania: Pegi. pg.123.
- Michael, D.P. (2000). *Children with autism (A parents' guide)*. Tirana, Albania: "Domenick Scaglione". ILAR. pg. 3-42; 175-201; 272-293.
- Saqellari, S. (2015). *Autizmi në këndvështrimin psikoedukativ*. Tirana, Albania: Onufri. pg. 10-45; 65,115; 127, 136.
- American Psychiatric Association. (1994). United States of America: APA.
- Mesibov, Gary B. Shea, V. Eric S. (2004). *The TEACCH Approach to Autism Spectrum Disorders*. United States of America: Springer. ISBN 0-306-48646-6.
- Robertson, K. (2016). *Adult Asperger's Syndrome: The Essential Guide*. United States of America. Create-Space Independent Publishing Platform. ISBN 9781530564477.
- Cort, Rebecca. & Selma, G Sapir. (1982). *Children with special needs: case studies in the clinical teaching process*. Pennsylvania, U.S.A.: Published by Philadelphia, Brunner-Routledge. ISBN 10: 0876302967 ISBN 13: 9780876302965.
- Barbera, L. Mary & Tracy, R. (2017). *The Verbal Behavior Approach: How to Teach Children with Autism and Related Disorders*. London, UK & Philadelphia, USA: Jessica Kingsley Publishers. ISBN 978 1 84310 852 8.
- Gutstein, E. S. & Sheely, K. (2002). *Relationship Development Intervention with Children, Adolescents and Adults; Social and Emotional Development Activities for Asperger Syndrome, Autism, PDD and NLD*. London, UK & Philadelphia, USA: Jessica Kingsley Publishers. ISBN 978 1 84310 717 0.
- Greenspan, I. Stanley & Wieder, S. (2009). *Engaging Autism: Using the Floortime Approach to Help Children Relate, Communicate, and Think*. Philadelphia, USA: Da Capo Press. 10 9 8 7 6 5 4 3 2 1.
- Salgados, F. (2018). *Terapia asistida por caballos, Propuesta de programas para personas con discapacidad: Discapacidad intelectual, física o sensorial, problemas de salud mental o problemas de adaptacion social. Terapia asistida por caballos TAC*. ASIN: B07BH84P8L. ISBN: 9781983100123.
- Hodge, T. (2014). *Logoterapia Psicosocial*. Spanish Edition: Kindle Edition. ASIN: B00L2I3E0C.
- Korb, C. (2014). *The Music Therapy Profession: Inspiring Health, Wellness, and Joy*. US: Xlibris. ASIN: B0793SKBYM.