

# THE EFFECTIVENESS OF ART THERAPY INTERVENTIONS FOR INDIVIDUAL WITH DOWN SYNDROME

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**THE EFFECTIVENESS OF ART THERAPY  
INTERVENTIONS FOR INDIVIDUAL WITH DOWN  
SYNDROME**

Postgraduate final paper

Osijek, 2019

Sveučilište Josipa Jurja Strossmayera u Osijeku  
Akademija za umjetnost i kulturu u Osijeku  
Poslijediplomski specijalistički studij Kreativnih terapija, smjer Art terapija

MAGDALENA RUBEŠA  
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ZA POJEDINCE S DOWN SINDROMOM**

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U Osijeku, 18. 11. 2019 godine

Potpis:



## Dedication

This thesis is dedicated to my family, my father who continuously believes in me, my mother and my brother who constantly support me in many ways. Also, to my husband who inspires me to work with Individuals with Down Syndrome and to our baby boy, Marley & Mimi as well.

### Acknowledgements

I sincerely give thanks to prof.prim.dr.sc. Dunja Degmečić, dr.med., my mentor for her support and guidance, as well as to all my professors and colleagues-friends who were a part of this special journey of mine.

## Abstract

The hypothesis of this thesis is that Art therapy Interventions can be used for Individuals with Down Syndrome to help them process their emotions through stressful period. Considering that the persons with DS most often have intellectual disabilities, developmental disabilities and specific deficits in short-term memory for verbal information, and their ability to learn from visual information is their strength, the Art therapy as a psychotherapeutic technique that uses the creative processes of the art work creation in order to improve the mental and emotional state of a person of any age opens up as an ideal medium for working with Individuals with Down Syndrome. It uses the creative process as a means of a communication channel through art – psychotherapy techniques which combine the concepts of psychology and visual arts, can be used as support to less verbal processing abilities and improve the quality of life by processing emotions in stressful life situations. In this research, The Person Picking an Apple from a Tree (PPAT), an art therapy assessment task that is scored using the Formal Elements Art therapy Scale (FEATS), was used to examine the effectiveness of Art therapy Interventions for Individual with Down Syndrome over the period of eight months.

This Single – subject design research shows an example of a 32 year old DS Individual who is with a help of Art therapy Interventions able to process intensive negative emotions related to the sale of a family home and moving to a new place, accepting this situation, dealing with aggravating circumstances related to this event and general empowerment at the end of the whole Art therapy process.

**Keywords:** Art therapy, Down Syndrome, intellectual disabilities, developmental disability, PPAT, FEATS



## Sažetak

Hipoteza ovog specijalističkog rada je da Art terapijske intervencije u radu s pojedincima s Down sindromom mogu biti učinkovite u procesiranju njihovih emocija kroz stresan životni period. Obzirom osobe s DS najčešće imaju intelektualne teškoće, razvojne teškoće te specifične deficite u kratkoročnom pamćenju za verbalne informacije, a njihova sposobnost da uče iz vizualnih informacija je njihova jaka strana, Art terapija kao psihoterapijska tehnika koja koristi kreativne procese stvaranja likovnih radova da bi poboljšala i unaprijedila psihičko, mentalno i emotivno stanje osoba bilo koje dobi otvara se kao idealan medij za rad sa osobama s DS. Upotrebljavajući kreativni proces kao komunikacijski kanal kroz art psihoterapijske tehnike koje kombiniraju koncepte psihologije i vizualne umjetnosti može koristiti kao potpora slabijoj verbalnoj sposobnosti obrade te poboljšati kvalitetu života procesiranjem emocija u stresnim životnim trenucima. Crtež PPAT-Osoba koja bere jabuku korišten je u ovom istraživanju kao Art terapijski zadatak za procjenu koji koristi FEATS-formalne elemente Art terapijske skale za procjenu kako bi izmjerili učinkovitost Art terapijskih intervencija za osobu s DS u periodu od osam mjeseci.

Ovdje je prezentirano proučavanje pojedinačnog slučaja 32 godišnjeg pojedinca s DS koji je uz pomoć Art terapije uspio procesirati intenzivne negativne osjećaje vezane za prodaju obiteljske kuće i skorašnje preseljenje, prihvaćanju preseljenja, rješavanju svih otegotnih okolnosti koje su pratile ovaj događaj te generalnom osnaživanju na kraju Art terapijskog procesa.

Ključne riječi: Art terapija, Down sindrom, intelektualne teškoće, razvojne teškoće, PPAT-Osoba koja bere jabuku, FEATS-Formalni elementi Art terapijske skale za procjenu

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## CHAPTER I: INTRODUCTION

The present study examines the effectiveness of Art therapy Interventions in Individuals with DS to help them process their emotions through difficult times. Art therapy Interventions are beneficial for people with DS because their strength is their ability to learn from visual information and Art therapy provides a safe, respectful and non – judgmental frame for that process to happen. The number of children diagnosed with DS continues to rise so it is important that art therapists are equipped with the most appropriate intervention techniques in order to develop the best individualized processes for these people. The individuals with developmental disabilities are often stigmatized and the stigmatization that such people often encounter diminishes their mental health, while successful social integration maintains and develops their mental health. This has been shown in a study conducted within the project “*Connect through colour, get closer through pictures*”, the results showed that the Art therapy as a tool contributes to the improvement of mental health in individuals with disabilities (Grbić et al., 2018).

This Single – subject design research shows an example of a 32 year old DS individual who changed from a stressed, upset, angry and furious state of emotions at the beginning of the Art therapy sessions to a self - confident, creative and proud state at the end of the Art therapy process that lasted eight months for the entire period of moving house.

### Social significance of the study

The present study examines the effectiveness of the Art therapy Interventions in Individuals with DS to help them process their emotions through difficult times. This area of study is especially important because the number of children diagnosed with DS continues to rise. According to CDC, Centers for Disease Control and Prevention between 1979 and 2003, the number of babies born with Down syndrome increased by about 30% so it is important that the art therapists and other professionals provide the best therapeutic support to these children, later adult individuals with DS. Their families seek out professional support and assistance. Lev-Wiesel and Zeevi’s research (2007) shows that mothers of children with Down Syndrome drew a larger number of barriers between the mother and child figures, which also tended to be more abstract, as compared to the figures drawn by mothers of children who did not have Down Syndrome. This strongly resonated with the idea to enhance

the treatment we needed in order to ensure that caregivers in support of the treatment also benefit from psychological and reflective processes (Allen, 1999) and make caregivers integral to the evaluation process (Marshall, 2017). Doing this research client's mother, as his caregiver was integral to the evaluation process.

This single – subject design shows how Art therapy Interventions can be used for Individuals with DS in order to help them process their emotions, resolve problems, improve communication and social skills. Art therapy process shows positive effects and it can be concluded that it can also help other Individuals with DS as the results of research “*Connect through colour, get closer through pictures*”- showed that Art therapy as a tool contributes to the protection and improvement of mental health in individuals with disabilities (Grbić et al., 2018).

### The Statement of the problem

This research is expanded into intellectual and developmental disabilities because while researching about DS couldn't find enough written pieces to help me support this thesis and that is why the research is expanded into intellectual and developmental disabilities.

The present research strives to illuminate the effectiveness of Art therapy Interventions for Individuals with Down Syndrome to help them process their emotions through a stressful period. According to Luzzatto et al. (2017) individuals with diverse physical and neurological disabilities often have present concurrent cognitive and emotional features (e.g., inattention, impulsivity, hyperactivity, and low self-esteem), which affect all areas of social, academic, and occupational functioning. Luzzatto et al. (2017) in their research of *Art therapy for People With Disabilities: Adaptation of the Creative Journey* we can find that health professionals have noted that psychotherapy based on verbal communication is often insufficient for what they consider the most common therapeutic goals for people with physical and neurological differences, including the need to increase concentration, autonomy, self-expression, and communication (Ainsworth & Baker, 2004; Caprio-Orsini, 1996; Miller & Bachrach 2006). Also, Collacott & Cooper (1997) researched a loss of skills that increased with age and was common over the age of 40 years in their five-year follow up study of adaptive behaviour in adults with Down Syndrome.

## The Purpose of the Study

The purpose of this research is to investigate the effectiveness of the Art therapy Interventions for Individuals with Down Syndrome in order to help them process their emotions through a stressful period. This area of research is important because until now the scientific research has been limited to Individuals with Down Syndrome and the number of children diagnosed with DS has become more common (CDC, Centers for Disease Control and Prevention, Data and Statistics on Down Syndrome).

According to Jones & Neil (2018) Individuals with Down Syndrome show an early development pattern of strengths and weaknesses, termed the Down Syndrome behavioral phenotype, with delays and differences in speech and language development that include vocal imitation, requesting, first words, vocabulary growth, and mastery of grammar. Communication impairments begin in infancy and continue into adulthood, impacting all the aspects of life, including education, employment, family, and community. Also, Luzzatto et al. (2017), outcome studies on *Art therapy with people with attention deficit disorders, learning difficulties, and intellectual disabilities* suggest that it promotes improvements in their capacity of symbol formation (Dubowski, 1984; Fox, 1998; Kuczaj, 1998), a decrease in feelings of helplessness (Stott & Males, 1984), and a decrease in behavioral difficulties (Bowen & Rosal, 1989; Mackenzie, Chisholm, & Murray, 2000; Stack, 1998).

This Single-case research will show that Art therapy provides a safe way to process emotions, resolve problems, improve communication and social skills for Individuals with DS. "Through integrative methods, Art therapy engages the mind, body, and spirit in ways that are distinct from verbal articulation alone. Kinesthetic, sensory, perceptual, and symbolic opportunities invite alternative modes of receptive and expressive communication, which can circumvent the limitations of language. Visual and symbolic expression gives voice to experience, and empowers individual, communal, and societal transformation" (AATA, 2017).

In this research, The Person Picking an Apple from a Tree (PPAT), "an art therapy assessment task that is scored using the Formal Elements Art therapy Scale (FEATS) to identify a client's mental health symptoms and progress in Art therapy" (Bucciarelli, 2011), was used to examine the effectiveness of the Art therapy Interventions for Individuals with Down Syndrome over the period of eight months. PPAT was used at the beginning and at the end of the Art therapy process as an assessment tool for the evaluation purpose. During the Art

therapy process these Art therapy intervention tools were used: Body Outline, Family portrait, Identity box, Mandala drawing, Licitar, ETC framework-using different materials, Finger painting, Race cards - message.

The therapy occurred once a week with the Individual with DS because the process of moving house lasted for that period of time

### The Research Question

For the purpose of this research, the following question is addressed:

Could the Art therapy Interventions be used for Individuals with Down Syndrome in order to help them process their emotions through a stressful period?

As a part of this research, the following hypothesis is included:

The Art therapy Interventions can be used for Individuals with Down Syndrome in order to help them process their emotions through a stressful period.

### The Definitions of key terms

#### Art therapy

Art therapy is an integrative mental health and human services profession that enriches the lives of individuals, families, and communities through active art-making, creative process, applied psychological theory, and human experience within a psychotherapeutic relationship. Art Therapy, facilitated by a professional art therapist, effectively supports personal and relational treatment goals as well as community concerns. Art therapy is used to improve cognitive and sensory-motor functions, foster self-esteem and self-awareness, cultivate emotional resilience, promote insight, enhance social skills, reduce and resolve conflicts and distress, and advance societal and ecological change (American Art Therapy Association, AATA, June 2017).

#### Developmental disability

Developmental disability is a severe, long term disability that can affect cognitive ability, physical functioning, or both. These disabilities appear before the age of 22 and are likely to be life-long. The term “developmental disability” encompasses intellectual disability but also includes physical disabilities. Some developmental disabilities may be solely physical, such as

blindness from birth. Others involve both physical and intellectual disabilities stemming from genetic or other causes, such as Down Syndrome and fetal alcohol syndrome (National Institutes of Health, October 2010).

### Down Syndrome (DS)

Down Syndrome results from the triplication of chromosome 21 and is the most common genetic cause of mental retardation in humans, occurring in ~1 in 800 newborns. The phenotype of DS is characterized by 180 clinical features, including cognitive impairments, muscle hypotonia, short stature, facial dysmorphic disorder, congenital heart disease, and several other anomalies. These clinical features can vary considerably in number and in severity, and certain abnormalities, such as acute megakaryoblastic leukemia and Hirschsprung disease, occur at higher frequencies in patients with DS than in the general population. Trisomy 21 has been known to be the cause of DS since 1959, when Lejeune and colleagues demonstrated the presence in three copies of chromosome 21 in persons with DS. The phenotype of DS is thus thought to be the result of gene-dosage imbalance. However, the molecular mechanisms by which such dosage imbalance causes abnormalities remain poorly understood (Yahya-Graison et al., 2007).

### Intellectual disability (ID)

Intellectual disability (ID) is a condition that is characterized by the impairment of global mental abilities and the consequent limitations in the individual's adaptive functioning. The latter is broadly based on the person's ability to perform day-to day activities and involves three main skills (American Association of Intellectual and Developmental Disabilities, 2016):

- 1) The ability to conceptualize, which includes the ability to use language, read and write, mathematical skills, general knowledge, memory and reasoning.
- 2) The ability to socialize, which is demonstrated by the person being able to empathize with others, make social judgments, have appropriate interpersonal communication and make and keep friendships.
- 3) The ability to perform practical tasks and be able to manage oneself in areas such as managing their own money, finding and holding a job, taking part in recreational activities, caring for their personal appearance and hygiene and generally being able to organize their school-or work-related activities (Bhaumik et al., 2016)

## PPAT

Person Picking an Apple from a Tree (PPAT) is an Art therapy assessment task that is evaluated using the Formal Elements Art therapy Scale (FEATS) to identify a client's mental health symptoms and progress in Art therapy, ( Bucciarelli, 2011). Participants are directed to use the standardized materials, a set of 12 Mr. Sketch™ scented markers and a 12” by 18” piece of white paper, and asked to “draw a picture of a person picking an apple from a tree.” The drawing is evaluated using 14 equal-appearing interval measurement scales in the Formal Elements Art therapy Scale (FEATS) Rating Manual (Gantt &Tabone, 1998), The International Art therapy Research Database.

## FEATS

Gantt, Gussak & Rosal (2015), citing Gantt & Tabone (1998) " Formal Elements Art therapy Scale (FEATS) is a rating system designed to measure global variables in a specific drawing. The scales measure global variables, some of which can be applied to other drawings, and several that are specific to the PPAT. Other variables can be measured on nominal scales such as colors used for particular elements, clothing of the person, and action of the person."

According to Gantt & Mills (2009), while it was originally developed for the use with the single-picture assessment (“Draw a person picking an apple from a tree” [PPAT]), researchers can also apply many of the 14 scales (Prominence of Color, Color Fit, Implied Energy, Space, Integration, Logic, Realism, Problem-solving, Developmental Level, Details of Objects and Environment, Line Quality, Person, Rotation, Perseveration) of the FEATS to other types of drawings (Gantt & Tabone, 1998).



## CHAPTER II: LITERATURE REVIEW

### Introduction

The proposed study examines the effectiveness of the Art therapy Interventions for an Individual with Down Syndrome to help him process emotions through a stressful period. According to Jones & Neil (2018) Individuals with Down Syndrome show an early developing pattern of strengths and weaknesses, termed the Down Syndrome behavioral phenotype, with delays and differences in speech and language development. Communication impairments begin in infancy and continue into adulthood, impacting all aspects of life, including education, employment, family, and community. O'Farrell (2017) noted that unemployment and social isolation are clear risk factors to mental health. Also, his research, *Feedback feeds self-identity: using Art therapy to empower self-identity in adults living with a learning disability*, which is part of the intellectual disability - a condition that is common to individuals with DS, suggests a prevalence rate of 27–40% (Raghaven& Patel, 2005, p. 38), meaning approximately one in three people with a learning disability will experience some mental health episode. "Historically, people with a learning disability were excluded from receiving psychotherapy (Royal College of Psychiatrists, 2004), though this changed significantly during the late twentieth and early twenty-first century, with psychotherapy and Arts therapies now viewed as valid specialist interventions to support people who have a learning disability" (Ashby, Goody, Hackett, Parker & Power, 2017:84). Research about *Art therapy for Persons With Disabilities: Adaptation of the Creative Journey* emphasized that health professionals have noted that psychotherapy based on verbal communication is often insufficient for what they consider the most common therapeutic goals for people with physical and neurological differences, including the need to increase concentration, autonomy, self-expression, and communication (Ainsworth & Baker, 2004; Caprio-Orsini, 1996; Miller & Bachrach 2006).

Furthermore, Luzzatto et al. (2017) in *Art therapy with people with attention deficit disorders, learning difficulties, intellectual disabilities* suggest it promotes improvements in their capacity for symbol formation (Dubowski, 1984; Fox, 1998; Kuczaj, 1998), a decrease in feelings of helplessness (Stott & Males, 1984) and a decrease in behavioral difficulties (Bowen & Rosal, 1989; Mackenzie, Chisholm & Murray, 2000; Stack, 1998).

The Art therapy process shows positive effects and can be concluded that it can also help other Individuals with DS as the results of research "*Connect through colour, get closer through pictures*"- showed that Art therapy as a tool contributes to the protection and improvement of mental health in individuals with disabilities (Grbić et al., 2018). The Art therapy Interventions are suggested to be a promising therapeutic style because it allows the Individuals with DS a safe and respectful environment to process emotions, resolve problems, improve communication and social skills.

This area of study is especially important because the number of children diagnosed with DS continues to rise, according to CDC - Center for Disease Control and Prevention, between 1979 and 2003, the number of babies born with Down syndrome increased by about 30%. Down syndrome (DS) is the most common chromosomopathy, with an incidence of 1:600 (Arapović, Farago, Pranjić, 2016) so it is important that the art therapist and other professionals provide the best professional therapeutic support and assistance to these individuals and their families.

The research presented in this literature review is organized thematically to show all important factors that this study is including: (1) Symptomatology of Down Syndrome, (2) Promising Art therapy Interventions, (3) Review of the Expressive Therapies Continuum, (4) Review of PPAT assessment.

## **2.1. Symptomatology of Down Syndrome**

Down syndrome results from the triplication of chromosome 21 which has been known to be the cause of DS since 1959, when Lejeune and colleagues demonstrated the presence in three copies of chromosome 21 in people with DS. The phenotype of DS is thus thought to be the result of gene-dosage imbalance, however the causes of those abnormalities remain poorly understood (Yahya-Graison et al., 2007). "Down's syndrome, the most common genetic cause of mental retardation, results in characteristic physical and neuropsychological findings, including mental retardation and deficits in language and memory" (Capone et al., 2001:1659). The same research, Neuroanatomy of Down's Syndrome: A High-Resolution MRI Study asserted that DS happens with an incidence of 1 in 800 live births (Nadel, 1999). Esbensen et al. (2014), citing Parker et al. (2010) "Down syndrome is the most common genetic cause of intellectual disability, affecting 1 out of every 691 infants". According to CDC, Centers for Disease Control and Prevention between 1979 and 2003, the number of babies born with Down syndrome increased by about 30%. Furthermore, Arapović,

Farago, Pranjić (2016) emphasized that Down syndrome (DS) is the most common chromosomopathy, with an incidence of 1:600. Certainly, previous researches have shown that number of children diagnosed with DS continues to rise.

Individuals with Down's syndrome have physical phenotype that is easily recognized, microcephalic, characteristic faces, hypotonia and smaller stature. Nonetheless, mental retardation of varying degrees is the most consistent feature of Down's syndrome (Capone et al., 2001) according to (Coyle, 1986). Capone et al. (2001) did a research on how some studies identified major deficits in both short-term and long-term verbal memory but visuospatial processing skills appear to be relatively preserved in Individuals with Down's syndrome. The same authors in their research *Neuroanatomy of Down's Syndrome: A High-Resolution MRI Study* were the first to evaluate regional brain volumes and tissue composition in Down's Syndrome from early childhood through young adulthood.

Their findings indicate that compared to matched developmentally normal subjects, the brains of individuals with Down's syndrome show 1) overall smaller volumes due to smaller volumes of both cerebral gray and white matter, 2) a disproportionately smaller cerebral volume, and 3) larger adjusted volumes of subcortical and parietal gray matter and temporal white matter components, with correction for overall brain volumes of gray or white matter, respectively. The frontal lobes have been frequently implicated in the cognitive deficits of Down's Syndrome, including executive dysfunction, inattention, and a tendency toward perseveration. Their finding is interesting in the light of the neuropsychological profile of Down's Syndrome subjects, which reveals deficits in language skills, with strengths in visuospatial processing, including visuospatial short-term memory. Also, they noted that the parietal lobes are important for visuospatial skills and the selective preservation of parietal lobe gray matter in Down's syndrome is consistent with the observed strength in visuospatial skills (Capone et al., 2001).

Additionally, Jones & Neil (2018) wrote about Interventions that are designed to address the areas of weaknesses in Individuals with Down Syndrome while capitalizing on characteristic strengths. For example, an Intervention for communication may capitalize by using visual and vocal instruction to teach or improve language. Also, the narrative abilities of children with DS aren't well developed (Arapović, Farago, Pranjić, 2016) but if delivered early, Interventions targeting the phenotypic weaknesses in Down Syndrome can minimize potential collateral effects. "Interventions addressing early motivational issues in Down syndrome could lead to accessing a greater number of challenging skill building opportunities" (Jones & Neil, 2018:5).

The Research on *Behavior and Adaptive Functioning in Adolescents With Down Syndrome: Specifying Targets for Intervention*, noted that deficits in adaptive functioning and behavior problems limit the ability of Individuals with Down syndrome to live as independent adults and that their behavior problems (hyperactivity, atypicality, withdrawal, social problems, thought problems, and attention problems) are frequently underdiagnosed because of their limited verbal ability, atypical presentation of symptomatology (Esbensen et al., 2014). Also in the same research they have advocated that Interventions designed to mediate inattention and social withdrawal are needed in order to promote independent functioning during adulthood for Individuals with DS. For example, as Individuals with Down Syndrome age, they continue to experience deficits in intelligibility (Jones & Neil, 2018). Adults with Down's Syndrome older than 40 years show cognitive decline in distinct phases, the initial phase of cognitive decline (before dementia) in adults with Down's Syndrome is characterized by a slowly progressive memory loss (Alexander et al., 2002).

Furthermore, Jones & Neil (2018) asserted that we need studies that focus on the specific needs of Individuals with Down syndrome, tailoring intervention to the critical areas of weakness. This also means designing studies that include only participants with Down Syndrome. The problems with evaluating effectiveness come from the diversity of Individuals with Down Syndrome; age, degree of impairment, and associated medical diagnoses are all variables that need to be considered (Jones & Neil, 2018:2).

## **2.2. Promising Art therapy Interventions**

Art therapy is an integrative mental health and human services profession that enriches the lives of individuals, families, and communities through the active art-making, creative process, applied psychological theory, and human experience within a psychotherapeutic relationship. Art therapy is used to improve cognitive and sensory-motor functions, foster self-esteem and self-awareness, cultivate emotional resilience, promote insight, enhance social skills, reduce and resolve conflicts and distress, and advance societal and ecological change (American Art Therapy Association, AATA, 2017).

Since the late 1970s, there has been a growing recognition of the emotional needs of people with a learning disability, part of intellectual disabilities that are common to individuals with DS (Bicknell, 1983; Sinason & Stokes, 1992). Historically, they were excluded from receiving psychotherapy (Royal College of Psychiatrists, 2004), this changed during the late twentieth and early twenty-first century, with psychotherapy and Arts therapies being viewed as a valid

specialist way to help people with disability, cause they are vulnerable and socially excluded in society (Ashby, Goody, Hackett, Parker & Power, 2017). Individuals with developmental disabilities, common to individuals with DS are often stigmatized and the stigmatization that such people often encounter diminishes their mental health, while a successful social integration maintains and develops their mental health (Grbić et al., 2018). According to Blackman (2003), Hollins & Sinason (2000) there is often no recognition that the person with a learning disability is grieving (Ashby, Goody, Hackett, Parker & Power, 2017). Marshall (2017), citing (Hollins & Esterhuyzen, 1997) thinks that unattributed behavioral problems may result from long-term unresolved bereavement or 'pathological grief'. The results of a study conducted within the project "*Connect through colour, get closer through pictures*" showed that Art therapy as a tool contributes to the improvement of mental health in individuals with developmental disabilities (Grbić et al., 2018). When people are unable to express their emotions because they have communication difficulties it is essential to use Interventions that will facilitate self-expression in a safe and supportive setting. Art therapy offers an opportunity to explore and express emotions, through both verbal and non-verbal means, (according to: Bull & O'Farrell, 2012; Rees, 1998; Stack, 1996) and make sense of their experiences by developing a sense of hope and meaning in their lives (Ashby, Goody, Hackett, Parker & Power, 2017). When working with adults living with a learning disability it is crucial to be clear, calm and concise, to use short sentences and clear and comprehensive feedback, body language, facial expressions and language selection will all operate as forms and layers of feedback (O'Farrell, 2017). O'Farrell (2017), citing Wang (2011) noted that for people with impaired verbal communication using a kinesthetic, motion-sensing drawing tool that facilitates whole body movement is beneficial. When people with a disability have difficulties with verbal communication and expression, an art-based therapy can be helpful because it does not rely on verbal communication in order to be successful and it can offer opportunities for personalized communication and interaction, sensory experiences and consistency. Art therapists working with this population often use flexible, adapted and individualized approaches in their practice (Ashby, Goody, Hackett, Parker & Power, 2017). According to Ashby (2011) art therapists working with people with severe learning disabilities and challenging behaviour in the UK worked flexibly including psychodynamic, client-centred and behavioral approaches while their effectiveness included providing safety and containment, empowerment, a thinking space to reflect and process, and an opportunity to develop a meaningful and trusting relationship. Therapists also helped enhance communication through the development of non-verbal skills by modifying and redirecting

challenging behaviour into more supportive channels of expression (Ashby, Goody, Hackett, Parker & Power, 2017). When working with this clinical population it is beneficial to have in mind full practice guidelines for children and adults with learning disabilities: 1. working relationship, 2. communication, 3. support networks, 4. managing risks and vulnerability, 5. therapy agreements, 6. assessment, 7. creative and flexible work, 8. psychotherapeutic work, 9. monitor progress, 10. professional responsibilities and self-care (Ashby, Goody, Hackett, Parker & Power, 2017).

During the Art therapy process this research used the Expressive Therapies Continuum (ETC) as a framework for the Art therapy Interventions such as Body Outline, Family portrait, Identity box, Mandala drawing, Licitar, Finger painting, Race cards - message.

### **2.3. Review of the Expressive Therapies Continuum**

The "Expressive Therapies Continuum" refers to a hierarchy of four levels of interaction between the client and the media. Those levels apply to basic modalities of expression: vision, sound, touch, words, movement. The levels are (1) kinesthetic/sensory, (2) perceptual/affective, (3) cognitive/symbolic and (4) creative (Kagin & Lusebrink 1978). The ETC organizes media interactions into a developmental sequence of information processing and image formation from the simplest to more complex (Hinz, 2009). It can provide a perfect framework to art therapists for addressing difficult therapeutic decisions, because it is a theoretical and practical guide, which provides a way to answer questions about what media to use, when to use that particular media and with which client population. Additionally, we can speak about media as fluid (Watercolor, Finger-Paint, Chalk Pastels, Oil Pastels ) that will probably evoke emotions, or solid (Stone, Wood, Clay, Plasticine, Colored Pencils, Collage, Crayons) to evoke internal structure during the creative process (Hinz, 2009). According to Rhyne (1973) the media choice is influenced by a personal style (Hinz, 2009). Hinz (2009), citing Kagin & Lusebrink (1978) stated that they categorized two-dimensional and three-dimensional media and showed that materials with more inherent solidity or structure (e.g. wood in three-dimensional, pencil in two-dimensional) are called resistive because they require the application of pressure to be used effectively. Media with less inherent structure are called fluid (e.g. wet clay in three-dimensional, watercolor paint in two-dimensional) cause they flow easily and quickly during the creative process. The figure 1. shows how the ETC form looks like.

## Overview of the Expressive Therapies Continuum

4. **Creative** Level

(Left Hemisphere Brain Functions)

(Right Hemisphere Brain Functions)

3. **Cognitive**<----->**Symbolic** |Level

(Component)

(Component)

2. **Perceptual**<----->**Affective** | Level

(Component)

(Component)

1. **Kinesthetic**<----->**Sensory** | Level

(Component)

(Component)

Figure 1. Expressive Therapies Continuum (ETC) Hinz, L. D. (2009). *Expressive Therapies Continuum: A framework for using art in therapy*. New York, NY: Routledge.

Hinz (2009), citing Riley (2004), McNamee (2004) shared that the Kinesthetic, Perceptual, Cognitive components representing the left side of the ETC can be seen as being involved with information processing predominantly in the left hemisphere. Similarly, Sensory, Affective, Symbolic components - can be viewed as representing processes occurring predominantly in the right hemisphere of the brain. Creative experiences have the potential to integrate information from both hemispheres of the brain. From personal communication between Lusebrink and Hinz on March 3, 2008 we can find out that it is crucial for understanding of the ETC to see Perceptual/Affective level as a bridge between the Cognitive/Symbolic level above it and the Kinesthetic/Sensory level below it (Hinz, 2009).

Hinz (2009), citing Lusebrink (2004) noted that the component processes represented on the left and right sides of The Expressive Therapies Continuum can be seen as parallel with functioning and information processing differences in the two hemispheres of the brain.

According to Carter (1998) the left hemisphere processes information in an organized, logical, categorizing way and it is also a place where verbal information is processed (Hinz, 2009). According to Edwards (1989), Riley (2004) the right hemisphere is where the majority of emotional and conceptual information is processed, also spiritual connections are made in the right hemisphere (Hinz, 2009).

The Expressive Therapies Continuum can be considered as art therapies foundational theory that attempts to explain the healing dimensions of expressive experiences that include restorative power of creativity (Hinz, 2009).

### 2.3.1. Kinesthetic/Sensory level

The K/S level of the ETC represents the basic, simplest form of the information processing. Developmentally this is the first way in which babies process information, for this reason experiences on this basic level of ETC are essential in therapeutic work with children. Indeed, this has been called the sensorimotor stage of cognitive development according to Piaget (1969). Because it is the simplest form of the information processing, information gathered through these channels do not require words because it is a rhythmic, tactile and sensual level (Hinz, 2009).

According to Damasio (1994), Lusebrink (2004), Siegel & Hartzell (2003) it is important for all individuals to have access to Kinesthetic and Sensory information as these types of input form the basis of many experiences and influence the understanding of emotions and the development of memory (Hinz, 2009).

### 2.3.2. Perceptual/Affective level

The second level of the ETC is corresponding to the schematic stage of graphic development in which children learn about the world and the forms around them. The information processing at this level can be emotional and raw and may or may not need words at this level (Hinz, 2009). According to Damasio (1994), Ekman (2003), Plutchik (2003) emotions are used in decision making, memory functioning and motivating behavior (Hinz, 2009).

Art therapy experiences on the Perceptual/Affective level of the Expressive Therapies Continuum can be designed to increase client's ability to see another person's point of view through a new visual language. Those experiences can help clients identify emotions,



facilitate discrimination among emotional states and improve their interpersonal communication and satisfying relationships (Hinz, 2009).

### 2.3.3.Cognitive/Symbolic level

This level is the most developmentally sophisticated. According to Piaget (1969) it corresponds to adolescence and the development of formal operational thought. This means adolescents can process information outside of their own personal experience and they are able to use symbols to represent their feelings and thoughts. Potentially, everyone can benefit from the ability to use symbolic thought as symbols provide access to intuitive functions.

Information processed on this level is complex as it requires planning, cognitive action and intuitive recognition. Verbal input is often required to gather meaning about cognitive operations or symbols involved on this level (Hinz, 2009).

### 2.3.4.Creative level

The fourth level of the ETC is the Creative level which is seen as a synthesis of the other three levels of the continuum. It is also a level in its own right, clearly distinguished by the integration, transformation and expression of experiences into new forms (Kagin & Lusebrink, 1978). Hinz (2009) asserted that the Creative level of the Expressive Therapies Continuum may exist at any or in all levels. Aso, Hinz (2009), citing Lusebrink (2004) emphasized that creative involvement itself can be healing without cognitive overlay or symbolic interpretation.

## 2.4. Review of the Assessment

Wadson (2011) noted that according to Webster's New Collegiate Dictionary (1965:53) the term assessment means "to sit beside", from the Latin *ad* (near to) and *sedere* (to sit), which is a perfect description of the Art therapy. Usually, the term *assessment* in the Art therapy depicts an instrument that is used to produce result, often a diagnosis. Gantt and Tabone (1998), citing Oster & Gould (1987) noted that the interest in using art for the assessment and treatment has a long history because for over one hundred and fifty years many writers have remarked on diagnostic information in the drawings of psychiatric patients. Having seen great fluctuations in color use, integration, line quality in the work of psychiatric patients we are convinced that these variables are more likely to mirror clinical state of patients (Gantt & Tabone, 1998).

Gantt and Tabone (1998:5), citing Lehmann and Risquez (1953) emphasized four specific requirements for an art based assessment:

1. The method should be applicable to any patient regardless of his degree of artistic ability, interest, co-operation and intelligence.
2. It should be possible to obtain repeated productions which are comparable in order to obtain a longitudinal view of the variations in the patient's graphic expression over a period of time.
3. The method should allow the comparison of works of different patients and of the same patient at different times by means of a standardized method of rating.
4. It should be possible to obtain useful and valid information on the patient's medical condition through the evaluation of his paintings without having to spend additional time in observing the patient while he is painting or in interviewing him about his finished product.

#### PPAT & FEATS

Person Picking an Apple from a Tree (PPAT) is an art therapy assessment task that is evaluated using the Formal Elements Art Therapy Scale (FEATS) to identify a client's mental health symptoms and progress in Art therapy (Bucciarelli, 2011). This drawing was first described by Viktor Lowenfeld (1939, 1947) in a study he conducted on children's use of space in art, but his instructions then were more detailed than art therapists do today (Gantt & Tabone, 1998).

According to Gantt and Tabone (1998) they have used the PPAT in their work for approximately 20 years and have been studying it systematically for the last 10 years. Usually, we collect the PPAT in the first Art therapy session, it is a task requiring an integrative approach as the client is asked to combine at least three items in order to solve a problem (Gantt & Tabone, 1998). Participants are directed to use the standardized materials, a set of 12 Mr. Sketch™ scented markers (red, orange, blue, turquoise, green, dark green, hot pink, magenta, purple, brown, yellow, and black) and a 12" by 18" piece of white paper, and asked to "draw a picture of a person picking an apple from a tree" without a time limit on doing the drawing.

The drawing is evaluated using 14 equal-appearing interval measurement scales in the Formal Elements Art therapy Scale (FEATS) Rating Manual (Gantt & Tabone, 1998), The International Art therapy Research Database. According to Gantt, Gussak & Rosal (2015) Formal Elements Art therapy Scale (FEATS) is a rating system designed to measure global

variables in a specific drawing (Gantt & Tabone, 1998). Gantt & Mills (2009) noted that while it was originally developed for the use with the single-picture assessment ("Draw a person picking an apple from a tree" [PPAT]), researchers can also apply many of the 14 scales (Prominence of Color, Color Fit, Implied Energy, Space, Integration, Logic, Realism, Problem-solving, Developmental Level, Details of Objects and Environment, Line Quality, Person, Rotation, Perseveration) of the FEATS to other types of drawings (Gantt & Tabone, 1998).

Gantt and Tabone (1998)

#### 14 SCALES

##### SCALE #1 - Prominence of Color

First scale measures how much color a person uses in the entire picture as color is related to affection.

##### SCALE #2 - Color Fit

Second scale assesses whether the colors used in the drawing are appropriate to the objects depicted.

##### SCALE #3 - Implied Energy

This scale attempts to measure the amount of energy used to make the drawing as energy is biologically mediated. Conditions such as organic mental disorders may also influence available energy. Gantt and Tabone (1998), citing Lehmann and Risquez (1953) shared that "energy output" was lower in the fingerpaintings of patients with organic mental disorders.

##### SCALE #4 - Space

This scale measures the amount of space used for the drawing. We had assumed that the amount of space used in a drawing is correlated with the artist's energy.

##### SCALE #5 - Integration

This scale measures the degree to which the items in the picture are balanced into a cohesive whole.

##### SCALE #6 - Logic

This scale attempts to sort out illogical responses to the request for the drawing.

##### SCALE #7 - Realism

The seventh scale assesses the degree to which items are realistically drawn. According to Groth-Marnat (1990) "most people's artistic ability stops when they are about 10 years of age so that most people are not particularly good artists" (Gantt & Tabone, 1998:371).

**SCALE #8 - Problem-Solving**

This scale is concerned with whether and how the drawn person gets the apple out of the tree.

**SCALE #9 - Developmental Level**

There is great interest in Lowenfeld's developmental stages as they apply to children's drawings. This scale compares the adult work with that of children at different stages.

**SCALE #10 - Details of objects and environment**

This scale focuses on how many extra objects are there in the drawing and how detailed they are in the drawing environment.

**SCALE #11 - Line Quality**

With this scale we try to describe the amount of the control a person seems to have over the variety of lines in the picture.

**SCALE #12 - Person**

With this scale we want to know if the person in the picture looks like a three-dimensional person rather than a stick figure.

**SCALE #13 - Rotation**

This scale measures the amount of tilt that the tree or the person show. This scale and the next (perseveration) were designed to capture variables associated with "disturbances of higher cortical functioning" that are the hallmarks of organic mental disorders (Gantt &Tabone, 1998:41).

**SCALE #14 - Perseveration**

According to Morrongiello (1996), perseveration is found in conditions affecting the frontal lobe and disorders such as Alzheimer's and other dementias, autism, learning disabilities, attention deficit/hyperactivity disorder (ADHD), and pervasive developmental disorder (Gantt &Tabone, 1998:42).

## Conclusion

Treating DS Individuals with the Art therapy Interventions in the research community is poor so this research is expanded to other terms which also include Individuals with DS as developmental and intellectual disabilities. The proposed study examines the effectiveness of the Art therapy Interventions for Individual with Down Syndrome to help him process emotions through a stressful period. This area of study is especially important because the number of children diagnosed with DS continues to rise, according to CDC - Center for Disease Control and Prevention, between 1979 and 2003, the number of babies born with Down Syndrome increased by about 30%. Furthermore, the latest research has identified that Down Syndrome (DS) is still the most common chromosomopathy, with an incidence of 1:600 (Arapović, Farago, Pranjić, 2016) so it is important that the art therapists and other professionals provide the best professional therapeutic support and assistance to these Individuals and their families. Several studies have mentioned the importance of strengths and weaknesses in Individuals with DS (Capone et al., 2001; Jones & Neil, 2018). According to Jones & Neil (2018) the Individuals with Down Syndrome show an early developing pattern of strengths and weaknesses, termed the Down Syndrome behavioral phenotype, with delays and differences in speech and language development. Also, Capone et al. (2001) researched that some studies identified major deficits in both short-term and long-term verbal memory but visuospatial processing skills appear to be relatively preserved in Individuals with Down's Syndrome.

Historically, they were excluded from receiving psychotherapy (Royal College of Psychiatrists, 2004), though this changed significantly during the late twentieth and early twenty-first century, with psychotherapy and art therapies now viewed as valid specialist interventions to support people who have a intellectual, learning disability cause they are some of the most vulnerable and socially excluded in society (Ashby, Goody, Hackett, Parker & Power, 2017:84). According to Blackman (2003), Hollins & Sinason (2000) there is often no recognition that the person with a learning disability is grieving (Ashby, Goody, Hackett, Parker & Power, 2017). Marshall (2017) says, citing (Hollins & Esterhuyzen, 1997) that unattributed behavioral problems may result from long-term unresolved bereavement or 'pathological grief'. One promising approach and response is certainly Art therapy with all the benefits that it can offer to an Individual with DS as the results of a study conducted within the project "*Connect through colour, get closer through pictures*" showed that Art therapy as a tool contributes to the improvement of mental health in Individuals with

developmental disabilities (Grbić et al., 2018). The Art therapy Interventions are suggested to be a promising therapeutic style because they allow the Individual with DS a safe and respectful environment to process emotions, resolve problems, improve communication and social skills. One promising approach, the Expressive Therapies Continuum (ETC) can be considered as an art therapies foundational theory that attempts to explain the healing dimensions of expressive experiences that include restorative power of creativity (Hinz, 2009). ETC is used in this research as a framework for the Art therapy Interventions with Individual with DS and Person Picking an Apple from a Tree (PPAT), an Art therapy assessment task that is evaluated using the Formal Elements Art therapy Scale (FEATS) (Bucciarelli, 2011), at the beginning and at the end of the Art therapy processes in order to identify the client's mental health symptoms and the progress in the Art therapy. Furthermore, many studies including the American Art Therapy Association have mentioned the benefits of Art therapy.

Art Therapy is used to improve cognitive and sensory-motor functions, foster self-esteem and self-awareness, cultivate emotional resilience, promote insight, enhance social skills, reduce and resolve conflicts and distress, and advance societal and ecological change (American Art Therapy Association, AATA, 2017). Also, Art therapy offers an opportunity to explore and express emotions, through both verbal and non-verbal means, (according to: Bull & O'Farrell, 2012; Rees, 1998; Stack, 1996) and make sense of their experiences by developing a sense of hope and meaning in their lives (Ashby, Goody, Hackett, Parker & Power, 2017).

Marshall (2017) citing (Allen, 1999:334) stated that as we deliver a treatment with a primarily emotional rather than cognitive component, in order to enhance the treatment we needed to ensure that caregivers in support of the treatment also benefit from psychological processes. One caregiver noted how the Art therapy improved their client's ability to deal with emotions, providing a better atmosphere at home and allowing the family to deal with their difficult lives" (Marshall, 2017). Caregivers as partners during the Art therapy process also benefit from the therapy experience as well as art therapist because they have valuable partner in the caregiver's feedback.

Jones & Neil (2018) research has identified that we need studies that focus on the specific needs of individuals with Down Syndrome, tailoring Intervention to the critical areas of weakness. This also means designing studies that include only participants with Down Syndrome. Problems with effectiveness evaluation come from the diversity of Individuals

with Down Syndrome; age, degree of impairment, and associated medical diagnoses are all variables that need to be considered (Jones & Neil, 2018:2).

In conclusion, current research addresses the effectiveness of the Art therapy Interventions for Individual with DS who was able to process intensive negative emotions related to the sale of a family home and moving to a new place, accepting this situation, dealing with aggravating circumstances related to this event and general empowerment of the client at the end of the whole Art therapy process. Also, research suggests parental collaborative approach for the most effective results in producing positive changes in Down Syndrome symptomatology.

## CHAPTER III: METHODS

### Introduction

The present study examines the Effectiveness of the Art therapy Interventions for Individual with DS to help him process intensive negative emotions through difficult times. Considering that the people with DS most often have developmental and intellectual difficulties, and their ability to learn from visual information is their strength, Art therapy as a psychotherapeutic technique that uses the creative processes of the art work creation in order to improve the mental and emotional state of a person opens up as an ideal medium for working with Individuals with Down Syndrome.

"The ways of looking at Art therapy research are as broad and rich as the profession itself, and include the continuum of viewpoints from objective to subjective" (Deaver, 2011:24).

This research examines the Effectiveness of the Art therapy Interventions using the PPAT (Person Picking an Apple from a Tree), an Art therapy assessment task that is evaluated using the Formal Elements Art therapy Scale (FEATS) at the beginning of research and then again following the final session to measure the therapeutic outcome.

"Single-case research designs are a part of a whole spectrum of case-study research models applied to the investigation of individual change in clinical practice. Such designs have the advantage of being adaptable to the clinical needs of the patient and the particular approach of the therapist. The designs are appropriate for the development of research hypotheses, testing those hypotheses in daily clinical practice and refining clinical techniques" (Aldridge, 1994:333).

This Single – subject design research shows an example of a 32 year old DS Individual who is, with the help of the Art therapy Interventions, able to process intensive negative emotions related to the sale of a family home and moving to a new place, accepting this situation, dealing with aggravating circumstances related to this event and general empowerment of the client at the end of the therapeutic process.



## Research Questions and Hypothesis

For the purpose of this research, the following question is addressed: Could Art therapy Interventions be used for Individual with Down Syndrome to help him process emotions through a stressful period? As a part of this research, the following hypothesis is included: Art therapy Interventions can be used for Individual with Down Syndrome to help him process emotions through a stressful period.

## Participants

Study participant was required to meet four criteria: (1) be between the ages of 18 and 40 years old, (2) have received a formal diagnosis of Down Syndrome, (3) agree to participate in Art therapy sessions during eight months, and (4) the Individual is not participating in any other style of mental health counseling. Participant was recruited based on personal availability from a local Association for Down Syndrome of Zadar County. The Individual's caregiver, who is also his mother provided a written consent, allowing for all therapeutic sessions to be photographed for research purposes. As his caregiver, his mother was also invited to attend brief consultations once per month to gain more information about the therapeutic process and future initiatives of the research.

## Procedures

According to Aldridge (1994) the advantages of single-case research designs are their flexibility of approach and the opportunity to include differing levels of rigor.

Single – case design is based on 32 year old Individual with DS who faced difficulties of personal traumatic experience of moving to a new place. He was guided through his creative process by an art therapist in training (the author of this research) in weekly individual Art therapy sessions that lasted sixty minutes, for eight months. All sessions and the art work will be photographed for the research purpose only. The sessions will only be attended by the Individual and the art therapist in training. Methodology will be narrative, descriptive and qualitative, using the PPAT assessment at the beginning of the research and then again following the final session to measure the therapeutic outcome. The research systematically investigates a client's response to working with different art materials, then analyses the findings to make new interventions for individual development, and draws conclusions about the possible uses of the Art therapy Interventions for other Individuals with DS.

"Perhaps the most important feature for many of us is that such an approach, while staying close to the practice of therapy, also allows the patient or client to be a partner in the research endeavor, and what they produce, say or do is considered an important and valid component in the process" (Aldridge, 1994:341).

This research presents transformation of the Individual with DS from the baseline condition observed in an initial period (phase A) when he was stressed, upset, angry, furious to intervention condition after the treatment (period B) - self - confident, creative, proud, calm and happy. This single – case design uses the same individual with DS, as the experimental and the control sample. Also, participant will be given the option to continue therapeutic treatment if needed.

### Instrumentation

Person Picking an Apple from a Tree (PPAT) is an Art therapy assessment task that is evaluated using the Formal Elements Art therapy Scale (FEATS) to identify a client's mental health symptoms and progress in Art therapy (Bucciarelli, 2011). Usually, we collect the PPAT in the first Art therapy session, it is a task that requires an integrative approach as the client is asked to combine at least three items in order to solve a problem (Gantt & Tabone, 1998). Participants are directed to use the standardized materials, a set of 12 Mr. Sketch™ scented markers (red, orange, blue, turquoise, green, dark green, hot pink, magenta, purple, brown, yellow, and black) and a 12” by 18” piece of white paper, and asked to “draw a picture of a person picking an apple from a tree” without a time limit on doing the drawing.

The drawing is evaluated using 14 equal-appearing interval measurement scales in the Formal Elements Art therapy Scale (FEATS) Rating Manual (Gantt & Tabone, 1998). According to Gantt, Gussak & Rosal (2015) Formal Elements Art therapy Scale (FEATS) is a rating system designed to measure global variables in a specific drawing (Gantt & Tabone, 1998). Gantt & Mills (2009) noted that while it was originally developed for use with the single-picture assessment (“Draw a person picking an apple from a tree” [PPAT]), researchers can also apply many of the 14 scales (Prominence of Color, Color Fit, Implied Energy, Space, Integration, Logic, Realism, Problem-solving, Developmental Level, Details of Objects and Environment, Line Quality, Person, Rotation, Perseveration) of the FEATS to other types of drawings (Gantt & Tabone, 1998).

## Variables

### Independent variables

"The independent variable is the intervention that is presumed to cause change" (Carolan, 2001:192).

The Independent variable in this study is the application of the Art therapy Interventions. The procedure for this study designates that the Individual participates in the individual Art therapy sessions for eight months, the period of moving to a new place.

### Dependent variables

"The dependent variable is that which is affected by change in the independent variable. Change in the dependent variable "depends" on the change in the independent variable" (Carolan, 2001:192).

The dependent variable in this study is the observable improvement in participant skills of accepting current family situation (moving to a new home) and making the best of it. This variable is measured through an Art therapy assessment, PPAT that is used at the beginning and at the end of the therapeutic process.

## Data Analysis

The data of this Single – case design will be collected and aggregated after the therapeutic process throughout the period of eight months.

Carolan (2001) citing (Kvale, 1996:192) stated that terms often associated with qualitative research include meaning condensation (reviewing all of the collected experience and condensing it to core elements), meaning categorization (organizing data gathered into previously identified or newly recognized categories), and narrative analysis (examining how the information is organized and presented by the subject, emphasizing the form of the subject's stories). Interpretation is another means of analyzing qualitative data. This process looks at the meaning of the data beyond what the subjects themselves intended or perhaps understood.

Methodology of this research will be narrative, descriptive and qualitative, using PPAT which is an Art therapy assessment that is evaluated using the Formal Elements Art therapy Scale (FEATS) for the analysis of a client's mental health symptoms and progress in Art therapy.

Usually, we collect the PPAT in the first Art therapy session and then at the end of the therapeutic process. Once the data have been collected over the period of the Art therapeutic process they will be compared in order to determine if the Individual showed an improvement in his condition.

### Limitations to the study

One of the main limitations to this study will be keeping the participant engaged in the study throughout the course of eight months because it is a long period of time. There isn't monetary benefit for the participant in this therapeutic research study but he has potential to benefit by developing more comprehensive and long – lasting skills of coping and resolving problems that will have effect on his quality of life as well as on the whole family situation.

## CHAPTER IV: RESULTS

Client is 32 years old Individual with DS, lives at home with his parents, is verbal but with impairments in language, has moderate mental retardation and does not suffer from any physical limitations. When offered to choose art materials he will always choose paint and gravitate toward using yellow as favourite and dominate colour, then blue that he connects with the colour of his eyes, and green that reminds him on grass. Warm colors dominate in his compositions. Client has always been focused while creating his art work, usually he tilts his head from one side to the other while lightly humming. He would sometimes glance up at me, give me a quick smile, and then continue to do his art work. Occasionally he would raise a hand to pat the top of my head or grab my hand to kiss it and then continue with his work.

In order to process the feeling of anger as successfully as possible I offered him the materials like the clay, wire and aluminum foil, which allowed him to express his creativity kinesthetically: squashing, pressing, ripping. In order to materialize the idea of moving and make it a little bit closer, we planted different succulent plants into a ceramic container. He was supposed to take care of the plants and take it with him into the new apartment. Thus I made him feel responsible and in control that he could associate with the plant growth process. This process could also bring a feeling of natural continuing of life in which the plant will continue to grow in a new environment. Symbolically, this process transferred on the client and the rest of his life and growth in the new apartment.

As the Art therapy was going on so was his art developing, his hand was becoming free and the surroundings on his picture were becoming richer. We continued to change the materials, and as the anger disappeared, we focused on the more realistic problems, again concentrating on getting back the feeling of control and positive visions of the new apartment. In his next assignment he created his new room that would be his safety zone and positive feelings words.

The leading thought throughout the whole process was the adjustment to the moving, but other important topics and situations that we processed appeared, e.g. losing his beloved brother or his crisis before the next sports competition. Discovering artistic materials was discovering himself, he learnt how to intervene into his own creations, to find characters in the spots – to develop creative thinking.

#### 4.1. 1st STAGE: Affective experience

May 17<sup>th</sup> 2018

A male mermaid

TABLE 1. Affective Experience

Activity	Materials/Procedure	Emergent function	Healing function
Body map	Outline of body, tempera markers; client colors body according to his feelings	Development of affective expression to reduce physical symptoms	Awareness that affective states can be related to somatic symptoms

In order to get to know client and to determine the aim of our work, I made an outline of his body and asked him to fill the inside according to his feelings. He started with the hair and the blue eyes, continued with the heart and the digestive system. Along the way he remembered he had to use the bathroom and after having returned he finished his drawing with blood vessels that reminded him of rain. When I asked him what made him sad, he said it was his brother's death and moving house he didn't want. Then we moved onto his surroundings. I told him to place the picture of his body into a safe place, i.e. to draw the surrounding that calmed him and where he was the happiest. He drew the sea. Satisfied with what he did, he concluded the only thing he was missing were the flippers, colouring them with green pastels he became a male mermaid.



Figure 2. A male mermaid, 2m x 60cm

June 14<sup>th</sup> 2018

## The Family

TABLE 2. Affective Experience

Activity	Materials/Procedure	Emergent function	Healing function
Family drawing	Markers, oil pastels; family portrait	Increased awareness of family dynamics	Identification of affective relationships

After having portrayed himself as a male mermaid and having chosen the sea as his safe place, the client expressed sadness and anger with moving house. The consultations with his mum made me decide to work on his adjustment to the moving house situation through the creative process. I started with the picture of his family in order to raise awareness of the family dynamics, and not of the space it takes place in. First he drew his dad, then K. (sister's boyfriend) who he talks often about and loves very much, M. (his younger sister, he remembered to draw a baby in her stomach), and he finished off the family by drawing his mother. As there was no space for him on A4 size of paper, I glued it on the bigger A3 size so he got a space for himself. He was drawn next to his mother, green colour dominates his body along with the orange, warm hands and blue eyes. He drew a black circle that represents a cloud that sends shiny lightning. He finished off the picture by painting a purple surface that represents the ground and colourful balls, the symbols of joy.



Figure 3. The Family, 39cm x 30cm



July 12<sup>th</sup> 2018

## A person picking an apple from a tree

Person Picking an Apple from a Tree (PPAT) is an Art therapy assessment task that is scored using the Formal Elements Art therapy Scale (FEATS) to identify a client's mental health symptoms and progress in Art therapy (Bucciarelli, 2011).

Participants are directed to use the standardized materials, a set of 12 Mr. Sketch™ scented markers (red, orange, blue, turquoise, green, dark green, hot pink, magenta, purple, brown, yellow, and black) and a 12” by 18” piece of white paper, and asked to “draw a picture of a person picking an apple from a tree” without a time limit on doing the drawing.

I asked the client to draw a person picking an apple from a tree. He started drawing a tree trunk that spread into a tree top with a brown felt-tip marker in the centre of the paper, then coloured the branches and the trunk. He continued painting the leaves and big red apples and finished the picture with a person. When I asked who the person picking the apple was, he said it was him. He drew the grass surface last.

## SCALE #1 - Prominence of Color

The client used 6 colours: brown, red, green, dark green, purple and blue.

## SCALE #2 - Color Fit

The colors used in the drawing are not appropriate to the objects depicted, for example purple hair and face, red hands and legs.

## SCALE #3 - Implied Energy

The lack of energy is used to make the drawing.

## SCALE #4 - Space

He used half the space for the drawing.

## SCALE #5 - Integration

The items in the picture aren't balanced into a cohesive whole.

## SCALE #6 - Logic

The person is in the air trying to pick an apple.

## SCALE #7 - Realism

The items, tree, person and apples aren't realistically drawn.

**SCALE #8 - Problem-Solving**

The person is in the air trying to pick an apple.

**SCALE #9 - Developmental Level**

According to Lowenfeld's developmental stages the client is in the Preschematic Stage (3-5 years). The Person with circle for head and two vertical lines for legs is great example for this stage of artistic development.

**SCALE #10 - Details of objects and environment**

There aren't any extra objects in the drawing except grass without any details in the drawing environment.

**SCALE #11 - Line Quality**

Lines are thin and short, mostly contour without variety in character of lines in the picture.

**SCALE #12 - Person**

The person in the picture looks like a stick figure, not like a three-dimensional person.

**SCALE #13 - Rotation**

There isn't any tilt that the tree or the person show in this drawing.

**SCALE #14 - Perseveration**

There are perseveration in this drawing in lines that make hair, grass and in objects (apples and leaves).



Figure 4. A person picking an apple from a tree, 45cm x 30cm

July 19<sup>th</sup> 2018

## The Titanic

TABLE 3. Affective Experience

Activity	Materials/Procedure	Emergent function	Healing function
Painting to music	Watercolor, music on CD; painting to music	Ability to identify emotions	Capture a feeling or mood evoked by music in visual form

Client's mum informed me it was his younger brother's death anniversary who died in a car accident. That's why I prepared an aquarelle to work on in order to enable the client to express the emotions connected with the tragic event as well as possible. He saw the prepared material and kept repeating "The Titanic", found the photograph of the ship and started drawing it by observing and listening to music from the movie. He drew without stopping, using every little cell of his body and soul, trying to get as life like image as possible watching over the least detail. He started by positioning the sinking part with a line of yellow to which he added chimneys and red propellers. When he had finished drawing the sunken ship without leaving out the multitude of windows, he circled everything with the blueness of the sky and the sea. As the ship broke into two parts, I asked him if he felt like that when he lost his brother. He answered yes. As they were born only one year apart, his brother was his second half, a twin brother, because, as the client says, his sister came later. Jure swam for his brother and won a lot of medals, and this therapy was ended by his invitation to a basketball tournament organized in remembrance of his brother A. in Diklo.



Figure 5. The Titanic,41,5cm x 30cm

## 4.2. 2nd STAGE: Elaboration of emotions

August 2<sup>nd</sup> 2018

### The Box of Identity

TABLE 4. Perceptual Experience

Activity	Materials/Procedure	Emergent function	Healing function
Inner-outer self portrait	Box, acrylic paint, wooden sticks, rice paper, collage stickers; Two depictions: (1) how others see me, (2) how I see myself and how I feel	Client enlarge view of themselves in relation to others, explore social roles and feelings about self	Compare and contrast inner and outer self-portraits; express feelings about similarities or discrepancies

We started our Art therapy session talking how people from the outside see the client. He exclaimed: "J. – the swimmer!" I told him to think a little bit how he would show that on the outer side of the box. After having chosen the blue acrylic paint, he started to colour the lid and the bottom part of the box. He painted the whole surface with the light brush strokes leaving the white box colour under the surface, discretely revealing the beginning point, while the lid border line remained white emphasizing the blueness of the bottom and the lid. When I asked him about his inner feelings and told him to fill the inside of the box according to his condition, he chose gentle orange and yellow rice paper and he put it in the box. Then he chose rubber material stickers shaped like one digit numbers. When I asked what the numbers he chose meant to him, he said they represent the low temperatures in winter, and he was born in December which is his favourite month. Then he took a green plush stick, formed a ball on the top. The ball represented a tree crown and he put it on the right side inside the box. He liked the styrofoam balls, he took 3 different sized balls and painted them in yellow acrylic paint. While they were drying on wooden sticks, I asked where he wanted to put them. He decided their position was in the inside of the box touching its beauty through the blue surface; as if it was his personal surface that other people see, the balls will expand into the space and give it light.



Figure 6. The Box of Identity, interior 24cm x 19cm x 6 cm

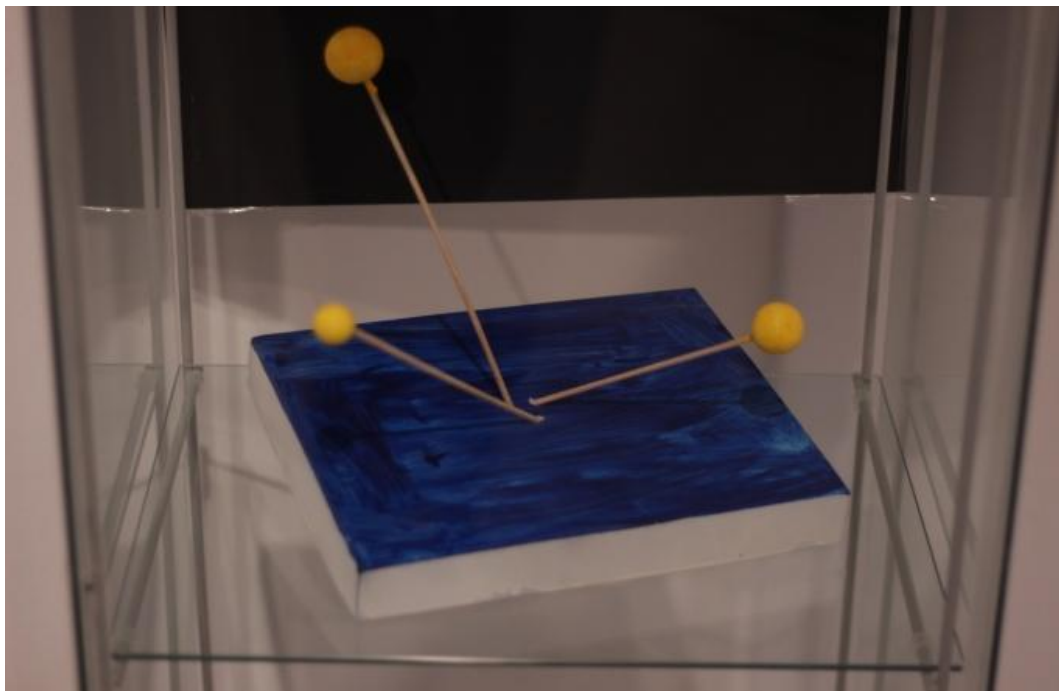


Figure 6.1. The Box of Identity, exterior 24cm x 19cm x 6 cm

August 9<sup>th</sup> 2018

## Hair

TABLE 5. Kinesthetic Experience

Activity	Materials/Procedure	Emergent function	Healing function
Firm tin foil sculpture	Firm golden tin foil, carving tools, using carving tools on firm tin foil to make a sculpture	Decreased tension; relaxation	Release of energy or tension

The art therapists use different kinds of materials in their therapy work because they evoke different memories and emotions. So I prepared a firm golden tin foil for this therapy and showed the client how to make different lines on it with the help of a sharp object, those lines form a shallow relief so he started creating a lot of wavy lines. Then I revealed the possibility of cutting the foil and creating thin line masses which he used and transformed his work into hair. He leaned it onto his own hair and said: "Look, hair like Jesus's!" After observing his work from different angles, he noticed it could serve as a crown. I am sure he could represent the primal Sun.



Figure 7. Hair, 24cm x 26cm

August 16<sup>th</sup> 2018

## The Licitar Heart

TABLE 6. Sensory Experience

Activity	Materials/Procedure	Emergent function	Healing function
Exploration of Croatian tradition with hands	Cardboard, a mirror, some felt and different strips;	Matching of internal sensations until a still point is reached	Awareness of internal sensations

I told the client the story of the Licitar hearts at the beginning of our therapy meeting and I showed him a licitar heart he could touch, with all the traditional ornaments including a miniature mirror on it. Then I gave him a rectangular piece of cardboard, a mirror, some felt and different strips. He wanted the yellow felt immediately and he glued it first, he glued the mirror in the middle then and reflected for some time on which strip colour to use for a hanging ribbon, finally he chose the one the closest to the colour brown. Then lined the back part of the mirror with the grey felt. When I asked him if he wanted to embellish his work, he took some blue rope to highlight the mirror. When I asked if he wanted the mirror to be a part of his new room, he said it was too small and that it would be best to give it to baby L. who will be born in November by his sister M. The mirror got a small bow in the end, since it will decorate the room of a baby girl who already has a proud uncle who loves her a lot and awaits her impatiently.

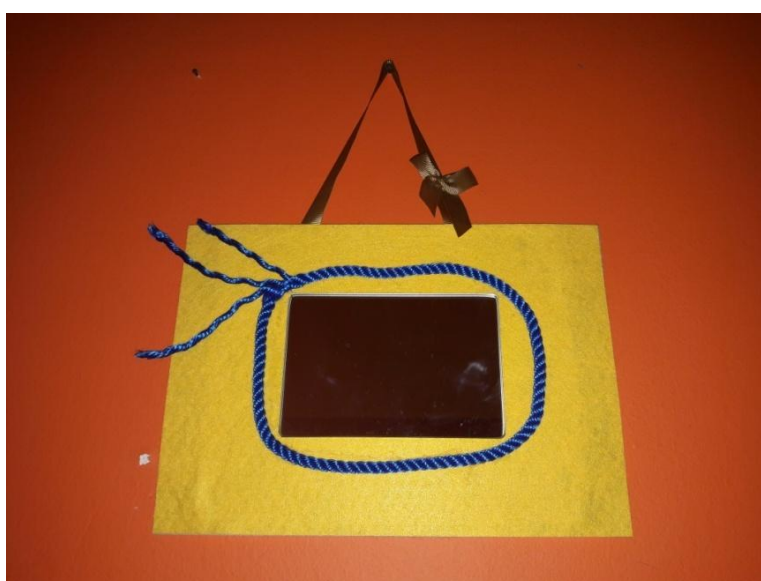


Figure 8. The Licitar Heart, 25cm x 20cm

August 23<sup>rd</sup> 2018

## A Heart-Tree

TABLE 7. Kinesthetic Experience

Activity	Materials/Procedure	Emergent function	Healing function
Tearing paper	Collage papers; tear paper into shapes and stick them on paper	Decreased tension; relaxation	Release of tension or energy

The client got the instructions to choose three collage papers and cut them into shapes he would stick on paper. The first colour he chose was yellow because it reminded him of the sun and cheese he likes to eat, the second one was green because it reminded him of grass, and he had a dilemma between the old golden and the brown for the last one. Finally, chose the brown one because it reminded him of the trees and chose to cut the paper with scissors because he likes the tidiness that he could not get by ripping paper. After he had cut the paper in the same way, forming it into strips, he started sticking the brown paper vertically, forming the tree stem and continued forming the branches that crossed the paper size on the top and left and right sides, then he wove a green net over the branches to bring them to life and ended with the yellow colour that brought light into the tree.

J. loved working with paper because of its rustling sounds which reminded him of the sound of the wind blowing through a tree crown and that made him extremely happy. Going to the Holy Mass on Sundays also makes him happy, there he is an altar boy and his mum sings in a choir. The best moment for him is the church bell ringing and the moment of the Consecration, he talked about it and asked what the Body of Christ was. I explained that the Sacramental Bread fed his soul and he decided he would ask his friend T. to join him on Sunday.

While he was watching his finished art work, he was satisfied with his strong layered tree, that in his eyes transformed into a heart the moment I turned it into a horizontal position.

Just like the trees are the hearts of our Planet and feed it with oxygen so is a Sunday Mass a heart of every new week for the client.





Figure 9. A Heart-Tree, 57cm x 30cm

August 30<sup>th</sup> 2018

## A turtle

TABLE 8. Kinesthetic Experience

Activities	Materials/Procedure	Emergent function	Healing function
Pounding, pushing, rolling clay	Clay, wooden sticks and a brush; forming clay	Perception of form	Release of energy or tension

When J. arrived, he found a white piece of paper, wooden sticks and a brush on the table. He took the brush and crossed over the clean paper several times then found a piece of wrapped clay in a bag and we remembered how to use it as a material. The client protested at first because clay made his hands dirty which he didn't like, but he kept on going and adding three clay balls onto the initial plate he shouted: "Look, a turtle!" Legs, a tail and a head followed. After I had shown him a picture of a turtle, he got confused and added two more legs to each side so we got a turtle with four pairs of legs. I showed him the photograph again and asked him to stand up and to act a turtle so in the end our turtle remained standing on four legs, and the other four formed the head. We talked about the turtle characteristics and its signature mark, the shell. J. asked me if I had parents or siblings. He said he had had a fight with his dad. When I asked him what had happened, he said it happened for no reason. I explained that different opinions are natural and that the most important thing was to watch over his words and his tone in those situations. When I asked how he had felt, he said he was sad and then he started modeling the turtle's shell. When he had finished, he started "glanjcati", as he says, the same way he wipes the dust. He asked me if I liked his coming over to Art therapy sessions, and I answered I was happy every time we met. He smiled happily and started decorating the turtle's shell pressing the lines in concentric circles. We started talking about his feelings, he said the meteorologist K. made him very angry because he couldn't read the meteorological maps well, which can be seen from the deepest line he pressed in the bottom of the shell. We talked about anger and I reminded him of our agreement we made in one of our first meetings – that he has to remember his safe place (the sea) in these situations – and after that the final lines that make the texture of the turtle's head were much softer and gentler.



Figure 10. A turtle, 10cm x 8cm x 4cm

September 13<sup>th</sup> 2018

## The Cloud

TABLE 9. Affective Experience

Activity	Materials/Procedure	Emergent function	Healing function
Mood states/ mind states	Cloud shaped piece of paper, crayons, tempera paint; using line, color, form to depict a feeling state	Emotion can be expressed in a safe manner	Safe expression of affect through schematic representation of emotion

The client owns a meteorological station and he is fascinated by black clouds. I prepared a cloud shaped piece of paper and asked him to colour its inside that hides under the black surface, which he did using a yellow crayon. When he had finished, he painted the yellow colour over with a layer of black and dark blue tempera paint; after it had dried, he started the process of discovering the lightning. As he was discovering the yellow colour under the surface, his linear movements transformed into circular ones, which matched his growing excitement. Over joyous, he thanked me, jumping from his chair he hugged and kissed me and then went on with his work. I showed him the photographs of lightning, his reaction was a wish to make another cloud with blue lightning. He painted the black paper with a silver marker and cut it into a cloud shape. The first cloud was lightened with yellow lightning, the second cloud's blackness disappeared under silver lightning. J. teaches us of the importance of perception changing because he doesn't see the black cloud, but the light that shines through the darkness.



Figure 11. The Cloud, 40cm x 30cm

September 20<sup>th</sup> 2018

## Clien's Moving House Garden

TABLE 10. Kinesthetic Experience

Activity	Materials/Procedure	Emergent function	Healing function
Planting	Plant container, drainage pebbles, soil, clay balls, sea shells, plants; planting	Increased well-being	Finding inner rhythm

Talking to client's mother I found out that he burst into tears while having dinner at their friends' house. It was because of the pending moving house and then I decided to take him through a more palpable process of moving with the help of planting. We talked about the fact that each plant needed a suitable container which would give it enough space for the growth. We put some drainage pebbles on the bottom of the container, above which we put some soil with clay balls to keep the moisture. He planted his little garden and embellished the garden with some sea shells, took it to his house where he takes care of it. The container changed its position, but it still grows with light and water for support. When I asked him who will be his light during the moving process he said: "Mum." I asked him about his thoughts on moving then, and he said: "I will survive." As we had to say goodbye for a 2-week period I was in Osijek, I asked him to send me a photograph of the plants every week, and he did.

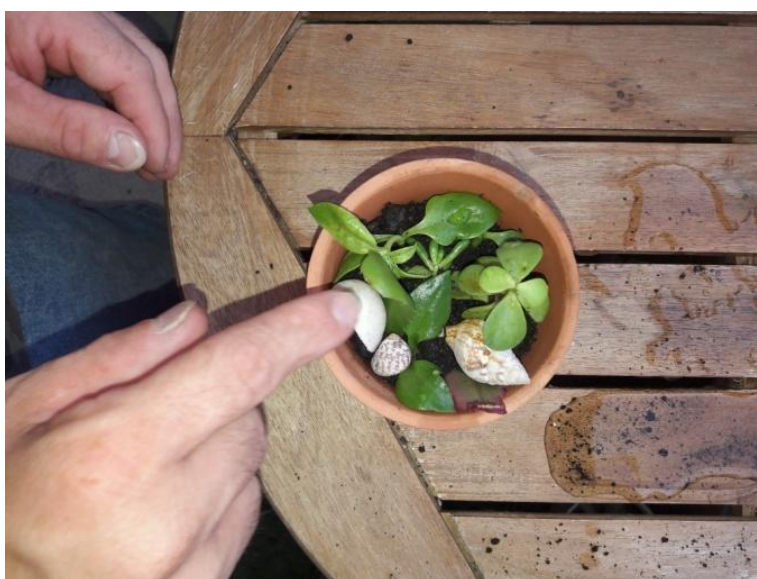


Figure 12. Client's Moving House Garden, Ø8cm

October 10<sup>th</sup> 2018

## The New Room

TABLE 11. Affective Experience

Activities	Materials/Procedure	Emergent function	Healing function
Collage of bedroom	Magazines, paper, glue; identify emotional expression	Reinforces emotions as signals and choice in responding to emotions	Identification of emotions

I gave J. several magazines and asked him to find and cut out the pictures he liked, having in mind the decoration of his new room after the moving house. He started with the pictures of Zadar, Oliver and Petar Grašo and his song *Moje zlato* and he was thrilled to see numerous photographs of fireplaces and mirrors because they were just what he needed. The city of Zadar is his city and he is happy he will continue to live in the city he was born in and raised. He needs a radio in his new room, so he chose a photograph of a singer he likes to listen, and added he could use a TV and a small desk. The photograph of a light room with big wardrobes with a lot of room for his meteorological station was a winner, he glued it in the top right corner and surrounded it with numerous fireplaces above which there were mirrors just like in *Alice in Wonderland*. The colour of the surface paper is yellow because that's the colour the client wants for his room. He was excited and completely dedicated to planning the design of his new room and never mentioned being sad about the moving, found out that what he wanted was a safe and warm place where he will continue his life surrounded by friends and family.



Figure 13. The New Room, 47cm x 41cm

November 15<sup>th</sup> 2018

## The Art Therapy Flag

TABLE 12. Affective Experience

Activity	Materials/Procedure	Emergent function	Healing function
Mandala	Tempera paint sticks, paper; abstract emotion	Reflective distance can allow discussion	Nonthreatening emotional expression

We have not seen each other for some time because of my study tour to the USA, so we said hi and talked. I showed him the new paints I had brought to work with, and he chose the tempera paint sticks for that day's painting. I prepared a white piece of paper with a circle in the middle and told him he could fill the paper with lines or colour surfaces thinking about his feelings during the therapy process. He chose the shiniest colours and started filling the circle in layers, and while he was painting the blue ball, he was talking about his sadness that day because he would not be able to walk to his bus ride home after the therapy because he had an extra training for his competition on Saturday. Then concluded it did not matter anyway because after the competition was over, we would go back to our ritual again.

He did his own intervention and painted the biggest part of the ball golden, painted the rest in colourful stripes and concluded it looked like a flag whose central position was a ball filled with layers of different emotions that intertwined each other. The client's presentation of the Art therapy flag is a beautiful symbol of the therapy process.



Figure 14. The Art Therapy Flag, 34cm x 24cm

November 22<sup>nd</sup> 2018

## Taekwondo Competition Preparations

TABLE 13. Kinesthetic Experience

Activity	Materials/Procedure	Emergent function	Healing function
Scribbles	Chalk pastels, brown paper; scribbling	Expression of emotion	Release of tension

The client's mother informed me he was making more and more mistakes performing, and the competition was only few days away. I decided to solve the situation in therapy so that J. would show the best result, having in mind his 2-year training practice. I asked him how he felt and if he was ready for the approaching competition, he answered he felt fear. We started with the relaxation exercises and deep breathing, I reminded him of his safe place (the sea) and how it should be activated in a disturbing situation. After that he showed me the way his exercise should be performed, and my actions mirrored his. Then I asked him to choose a coloured chalk which would represent his fear on paper, in the meantime I put some cardboard on the wall.

## PICTURE 1

He chose a sharp black chalk and he drew strong non-interrupted outside-inside out lines with his left hand (therapist's instruction). The chalk broke from the strength of his pressure into several pieces. When he wove a line net, he found a stopping point himself and he blurred the net with his hands leaving his fingerprints as if he wanted to erase his fear.

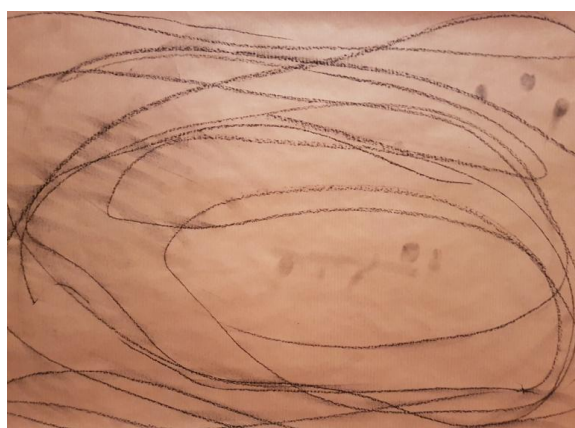


Figure 15. PICTURE 1, 69,5cm x 45,8cm



## PICTURE 2

As he was expressing fear of his coach's anger with his mistakes, we talked about the importance of their relationship and mutual respect so I asked him to choose his coach's colour he would hold in his left hand, a colour for himself in his right hand, and then start simultaneous movements across the paper thinking about the training. The coach was painted in red, J. in blue. It is visible that each has his role and that they started to build a relationship with small overlaps in the lower part.



Figure 15.1. PICTURE 2, 69,5cm x 43,7cm

## PICTURE 3

The last picture describes The client's expectations for the competition. He chooses yellow, orange and purple to build a form, after that he looks for the white colour and fills in a significant part of the surface with white. He continues with the brown which reminds him of a dragon and he decides to be a taekwondo dragon on Saturday. When I ask which colour he will use to finish the painting, he chooses red and he marks the picture with the colour he marked his coach with. J. won 2 silver medals at the competition!



Figure 15.2. PICTURE 3, 69,5cm x 44,5cm

November 27<sup>th</sup> 2018

## Cats

TABLE 14. Kinesthetic Experience, Affective Experience

Activities	Materials/Procedure	Emergent function	Healing function
Wire sculpture & Collage of cats	Wire, collage paper, drawing and painting materials, glue, wooden sticks, wool; sculpturing, identify various emotional expressions	Expression of emotion; ability to distinguish among emotions, further development of emotional vocabulary	Release of energy or tension; identification of emotions

I congratulated him on the medals won in the taekwando competition and asked him to tell me about his experiences. He told me he was happy he took part in it and that the 2 certificates of appreciation and 2 silver medals made him very happy. He sat and started telling how he tickles his dad's feet in the evening, and that makes him happy because he always makes his dad laugh. I offered him to finish off the work we started before I went away on my study tour. He immediately remembered Bura (a cold western wind) he made out of wire and Renato (the grey cat) and Kata (the orange cat). He continued the conversation complaining about his back pain and the cold and he remembered his friend R. whose arm is in pain. R. is client's swimming trainer, but above all a friend he likes very much and enjoys talking about. He is also a godfather to Renato the Cat because he spotted him in front of the car and saved his life. Renato bothers Kata today just as client's dad bothers him when he asks about the schedule of his dry training (training with a skipping rope, usually inside). Still, J. says it doesn't matter because he makes his dad laugh with tickling in the evening just like Renato makes Kata happy with his adventures and hunting the mice in the grass which he is proud of. Since the client had a bad cold and sneezed a lot, he asked me to assist him by cutting different shapes. He thanked me for my help and glued all the shapes into their place, then built a grass surface by ripping the green collage paper and created a safe and happy place for the cats, and then he moved onto the blueness of the sky in order to complete the story. He made a circle around their heads using different nuances of the blue tempera paint and he connected them with a heart shaped cloud because love is what is worthwhile and what connects people. The sun is shining on them on the right, and the clouds are hugging them on the left.

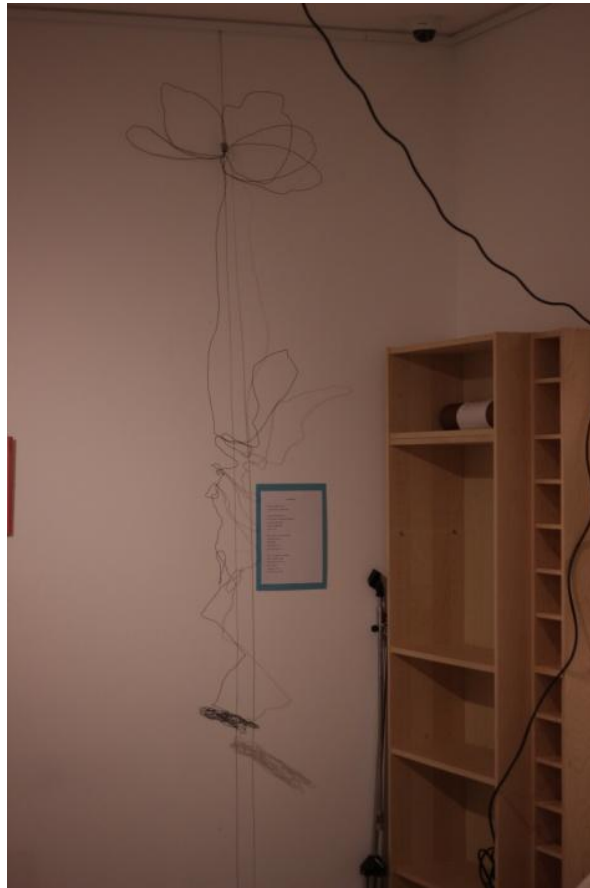


Figure 16. Bura (cold western wind), 3,40m x 30cm



Figure 16.1. Cats, 50cm x 70cm

### 4.3. 3rd STAGE: Reconciliation

December 6<sup>th</sup> 2018

Zero

TABLE 15. Perceptual Experience

Activity	Materials/Procedure	Emergent function	Healing function
Drawing from reality	Drawing and painting materials; drawing an animal	May increase empathic understanding	Perceptual focus on external objects enhances interaction with external environment

We started today's therapy with a concentration exercise by repeating circular movements in the air to help the client focus and start the process. J. celebrated his 33<sup>rd</sup> birthday the day before and his wish was a big piece of paper in order to draw his Zero. Zero is his 9-year-old Shi Tzu, his friend he walks and pets a lot. He started drawing the sketch of the head including all the details important for a dog: the snout, the characteristic hanging ears, and then he continued contouring the body and the little paws, chose Zero's colours: black, white and silvery-grey and started painting. He played with the tempera paints and did research on the traces the colours left on the paper and found out he could paint his fingers whose fingerprints gave special texture to the painting. When he had finished, he smiled sweetly and shouted it was a real Zero. I asked him if it was easier for him now that his friend Zero was moving into a new flat, together with his family and the cats.

He nodded yes and added that he would take Zero's basket, in which he felt secure, into the new flat. Then he surrounded Zero with brown and golden colours in lines of different character and direction and wove a basket, drew a bone in the left corner in order to take additional care of Zero – so he wouldn't be hungry. He protected Zero with the basket and the bone and kissed him in the end.



Figure 17. Zero,70cm x 52cm

December 11<sup>th</sup> 2018

A person who is picking the fruit

Person Picking an Apple from a Tree (PPAT) is an Art therapy assessment task that is scored using the Formal Elements Art therapy Scale (FEATS) to identify a client's mental health symptoms and progress in Art therapy (Bucciarelli, 2011).

Participants are directed to use the standardized materials, a set of 12 Mr. Sketch™ scented markers (red, orange, blue, turquoise, green, dark green, hot pink, magenta, purple, brown, yellow, and black) and a 12" by 18" piece of white paper, and asked to "draw a picture of a person picking an apple from a tree" without a time limit on doing the drawing.

#### SCALE #1 - Prominence of Color

The client used 11 colours: brown, red, orange, green, dark green, purple, blue, turquoise, yellow, pink, black.

#### SCALE #2 - Color Fit

The colors used in the drawing are appropriate to the objects depicted.

#### SCALE #3 - Implied Energy

The drawing is made with a lot of energy.

#### SCALE #4 - Space

He used all the space for the drawing.

#### SCALE #5 - Integration

The items in the picture are balanced into a cohesive whole.

#### SCALE #6 - Logic

There aren't illogical responses to the request for the drawing.

#### SCALE #7 - Realism

The items: the tree, the person, the grasshopper, the bird, the basket and the sun are realistically drawn.

#### SCALE #8 - Problem-Solving

The person gets the kiwi from the tree with hands.

#### SCALE #9 - Developmental Level

According to Lowenfeld's developmental stages Jure's drawing is in the schematic stage (6 years).

#### SCALE #10 - Details of objects and environment

There are extra objects like the grasshopper, the bird, the basket and the sun in the drawing with little details in the drawing environment.

**SCALE #11 - Line Quality**

Lines are contour and structure, with variety in character - thick, thin, short, long, horizontal, vertical, diagonal, curved.

**SCALE #12 - Person**

The person in the picture looks like a three-dimensional person.

**SCALE #13 - Rotation**

There is tilt that the tree, the person, the grasshopper and the bird show in this drawing.

**SCALE #14 - Perseveration**

There are perseveration in this drawing in lines that make hair, grass and in objects (kiwi and leaves).

L. came on December 12<sup>th</sup>, client's niece we had been all waiting for a long time. He tells me, filled with joy, that he is travelling with his parents to Zagreb on Saturday to meet the baby. Then asks what we are doing today and I answer that we are drawing a person who is picking the fruit (a formal test in the Art therapy). He decides he will be that person because he loves his grandfather's kiwi turned into a green milkshake, is not sure how to start because he is not sure what kiwi looks like so I find a photograph of a kiwi in order for him to observe and draw. After having seen the photograph, we make a circle shape of a kiwi in the air and then we transform the closed circled line onto the paper with a brown scented felt-tip marker. A tree with leaves and a "rain" of kiwis stands in the center of the paper. He draws himself picking the kiwi on the left side of the tree, throwing it into a box on the opposite side. After having drawn the picture, he starts colouring it. While painting himself, he makes comments about me loving him, then he kisses my hand and goes on painting his trousers spotting a brown dot under his figure that reminds him of a grasshopper. While drawing a grasshopper's eye, he says that his swimming trainer's daughter is afraid of grasshoppers. For the end of art work he draws a bird which he puts in the top right corner, the bird is, like the grasshopper, in movement, flying into the heights.

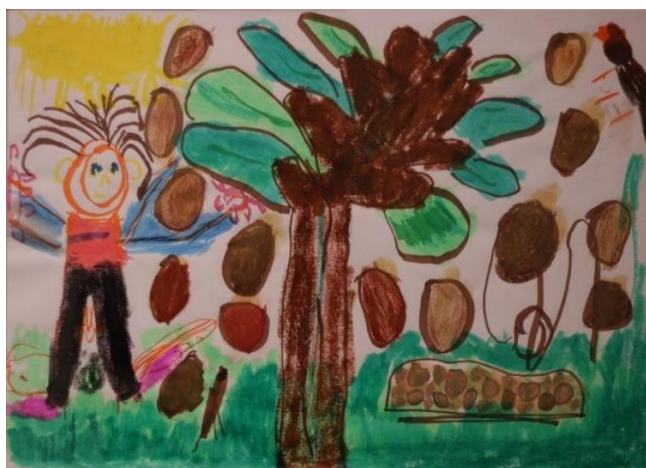


Figure 18. A person who is picking the fruit, 45cm x 30cm

December 12<sup>th</sup> 2018

*Snowflakes Keep Falling*  
Message for the exhibition visitors

TABLE 16. Sensory Experience

Activities	Materials/Procedure	Emergent function	Healing function
Finger painting to music	Finger paint, paper, the song <i>Snowflakes Keep Falling</i>	Emergence of a state of calm, focused attention	Calming the mind and focusing attention

We impersonated snowflakes singing the song *Snowflakes Keep Falling*, and then we watched the photographs of snowflakes in order to see how different they are, in spite of their similar form and structure. I told the client that every person has a unique fingerprint so we started applying white colour on our fingers and made snowflake imprints on dark blue paper. Although he likes his hands to be clean, I was surprised how happy he was dipping his fingers into the paint and how careless he was, like the children who see the snow for the first time. We worked together, each from one side and we met in the middle and finished our snow story together.

When I asked him how he felt working in pairs he said it felt nice and petted me on the hand. We continued creating his message for all the exhibition visitors, family and friends. The main thought he expressed and wrote down refers to togetherness and happiness. The client is just like that, a light and an inspiration for all of us.



Figure 19. *Snowflakes Keep Falling*,  
34cm x 12cm



Figure 19.1. Message for the exhibition visitors,  
34cm x 24cm



## CHAPTER V: DISCUSSION

The primary research focus of this study was exploring the effectiveness of the Art therapy Interventions in an Individual with DS to help him process emotions through a stressful period.

This area of study is especially important because the number of children diagnosed with DS continues to rise, according to CDC - Center for Disease Control and Prevention, between 1979 and 2003, the number of babies born with Down Syndrome increased by about 30%. Down Syndrome (DS) is the most common chromosomopathy, with an incidence of 1:600 (Arapović, Farago, Pranjic, 2016) so it is important that the art therapists and other professionals provide the best professional therapeutic support and assistance to these individuals and their families.

According to Jones & Neil (2018) the Individuals with Down Syndrome show an early developing pattern of strengths and weaknesses, termed the Down Syndrome behavioral phenotype, with delays and differences in speech and language development that include vocal imitation, requesting, first words, vocabulary growth and mastery of grammar. Communication impairments begin in infancy and continue into adulthood, impacting all the aspects of life, including education, employment, family, and community.

Luzzatto et al. (2017), citing Ainsworth & Baker (2004), Caprio-Orsini (1996), Miller & Bachrach (2006) emphasized that health professionals have noted that psychotherapy based on verbal communication often insufficient for what they consider the most common therapeutic goals for people with physical and neurological differences, including the need to increase concentration, autonomy, self-expression, and communication.

When people are unable to express their emotions because they have communication difficulties it is essential to use Interventions that will facilitate self-expression in a safe and supportive setting.

"As a treatment team we are encouraged to deal with the whole person, treating all attributes: the physical attributes—managing the pain; the mental attributes—bringing understanding to what is happening; the emotional attributes—feeling the reality of the experience; and the spiritual attributes—touching the soul or communing with a place so deep within we struggle to define or describe it" (Bardot, 2008:183).

Art therapy offers an opportunity to explore and express emotions, through both verbal and non-verbal means, (according to: Bull & O'Farrell, 2012; Rees, 1998; Stack, 1996) and make sense of their experiences by developing a sense of hope and meaning in their lives (Ashby, Goody, Hackett, Parker & Power, 2017). When working with adults living with a learning disability it is crucial to be clear, calm and concise, to use short sentences and clear and comprehensive feedback, body language, facial expressions and language selection will all operate as forms and layers of feedback (O'Farrell, 2017). O'Farrell (2017), citing Wang (2011) noted that using a kinesthetic, motion-sensing drawing tool that facilitates whole body movement is beneficial for people with impaired verbal communication. When people with a disability have difficulties with verbal communication and expression, an arts-based therapy can be helpful because it does not rely on verbal communication in order to be successful and it can offer opportunities for personalised communication and interaction, sensory experiences and consistency. Art therapists working with this population often use flexible, adapted and individualised approaches in their practice (Ashby, Goody, Hackett, Parker & Power, 2017).

"Through integrative methods, Art therapy engages the mind, body, and spirit in ways that are distinct from verbal articulation alone. Kinesthetic, sensory, perceptual, and symbolic opportunities invite alternative modes of receptive and expressive communication, which can circumvent the limitations of language. Visual and symbolic expression gives voice to experience, and empowers individual, communal, and societal transformation" (AATA, 2017).

The research examines the Effectiveness of Art therapy Interventions using the PPAT (Person Picking an Apple from a Tree), an Art therapy assessment task that is evaluated using the Formal Elements Art therapy Scale (FEATS) at the beginning of the research and then again following the final session to show that the hypothesis of this research - *Art therapy Interventions can be used for an Individual with Down Syndrome to help him process emotions through a stressful period* - is valid and showed through client's artwork. There is an improvement in all 13 scales that are measured using the PPAT assessment, only the last one that includes perseverations is the same in the first and the last drawing.

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The Art therapy Interventions included in this research are supported by the research reviewed in this study, ETC is used in this research as a framework for the Art therapy Interventions: Body Outline, Family portrait, Identity box, Mandala drawing, Licitar, Finger painting, Race cards-message.

This Single-subject research shows an example of a 32 year old DS Individual who is able to express intensive negative emotions related to the sale of a family home and moving to a new place with the help of Art therapy Interventions during 1st stage of the Art therapy process, deal with aggravating circumstances related to this event during 2nd stage and accept this situation at the end of the therapeutic process in 3rd stage while developing creativity during the whole process.

"Creativity is not a special mental process but involves the everyday cognitive processes" (Degmečić, 2017:22).

### 5.1. Limitations to the study

The Art therapy resources related to DS are still limited. There are concerns that the collected resources are without peer review and that all individuals are different in their medical diagnosis.

The author also integrated personal experience gained during the work at the internship site while working with individuals with DS. For example, many clients with DS like challenging tasks so the present research might contain an optimistic point of view.

One of the main limitations of this study was keeping the participant engaged in the study throughout the course of eight months because it was a long period of time. There was no monetary benefit for the participant in this therapeutic research study but he had a potential of benefiting by developing more comprehensive and long – lasting skills of coping

and resolving problems that would effect on his quality of life as well as on the whole family situation.

## 5.2. Implications for future research

The Art therapy Interventions proposed in this study for an Individual with DS to help him process emotions through a stressful period were chronologically noted and divided into three stages, which gradually lead to accepting a stressful situation, dealing with aggravating circumstances related to the event and general empowerment at the end of the therapeutic process.

The art therapist may continue examining the most effective materials and interventions while working with this growing population, having in mind that every individual has unique needs. When implemented in practice the adaptation of these Interventions should be taken into consideration.

Furthermore, Jones & Neil (2018) asserted that we need studies that focus on the specific needs of Individuals with Down Syndrome, tailoring Intervention to the critical areas of weakness. This also means designing studies that include only participants with Down Syndrome. The problems in evaluating effectiveness come from the diversity of Individuals with Down syndrome; age, degree of impairment, and associated medical diagnoses are all variables that need to be considered (Jones & Neil, 2018:2).

## CHAPTER VI: CONCLUSION

Treating DS Individuals with Art therapy Interventions in the research community is poor so this research is expanded to other terms which also include Individuals with DS and developmental and intellectual disabilities. The proposed study examines the effectiveness of the Art therapy Interventions for Individual with Down Syndrome to help him process the emotions through a stressful period.

According to Blackman (2003), Hollins & Sinason (2000) there is often no recognition that the person with a learning disability is grieving (Ashby, Goody, Hackett, Parker & Power, 2017). Marshall (2017), citing (Hollins & Esterhuyzen, 1997) says that unattributable behavioural problems may result from long-term unresolved bereavement or ‘pathological grief’. One promising approach and response is certainly Art therapy with all benefits that it can offer to an Individual with DS as the results of a study conducted within the project “*Connect through colour, get closer through pictures*” showed that Art therapy as a tool contributes to the improvement of mental health in Individuals with developmental disabilities (Grbić et al., 2018). Art therapy Interventions are suggested to be a promising therapeutic style because they allow the Individual with DS a safe and respectful environment to process emotions, resolve problems, improve communication and social skills. One promising approach, the Expressive Therapies Continuum (ETC) can be considered as an art therapies foundational theory that attempts to explain the healing dimensions of expressive experiences that include restorative power of creativity (Hinz, 2009). *The Creative mind* highlights that creativity includes all the brain (Degmečić, 2017).

ETC is used in this research as a framework for Art therapy Interventions with an Individual with DS and Person Picking an Apple from a Tree (PPAT), an Art therapy assessment task that is evaluated using the Formal Elements Art therapy Scale (FEATS) (Bucciarelli, 2011) is used at the beginning and at the end of Art therapy processes in order to identify the client's mental health symptoms and progress in Art therapy.

Art therapy is used to improve cognitive and sensory-motor functions, foster self-esteem and self-awareness, cultivate emotional resilience, promote insight, enhance social skills, reduce and resolve conflicts and distress, and advance societal and ecological change (American Art Therapy Association, AATA, June 2017). Also, the flexibility of the art therapist is what

determines the success of a therapeutic application for students with special needs (Albert, 2010:91).

"We have a responsibility to pursue knowledge concerning what is healing about working with art so that others may be healed. We have a responsibility to communicate with other professionals who do not understand the language of Art therapy: We cannot be satisfied with demanding that they learn our language. We must be bridge builders, and research is a critical building block" (Carolan, 2001:191).

This Single-subject research showed that the storm of negative feelings associated to the moving was very intense and all the interventions prepared for the therapy process were aimed to help him accept the moving, solve all the difficult circumstances and encourage the client in general. With the contours of the body, the client revealed his enormous sadness about the moving, with the picture of his family he tells its importance. In it he sees his dad as a pillar and he draws him first, he shows the creation of a new family, with the birth of the niece (the centre of the composition), and with his mum, the client keeps the family dynamics, the friendship. The family is the basis of life for the client as his message reveals: "Live together and happily!"

He reminded me, the therapist, of the iconic importance of having faith in the process, for which I am immensely grateful, as for all the Art therapy moments we had spent together.

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List of abbreviation:

AATA - American Art Therapy Association

ADHD - attention deficit/hyperactivity disorder

CDC - Centers for Disease Control and Prevention

DS - Down syndrome

ETC - Expressive Therapies Continuum

FEATS - Formal Elements Art Therapy Scale

ID - Intellectual disability

PPAT - The Person Picking an Apple from a Tree, an Art therapy assessment