Hot Topics:

Recent Research Findings

On

BDD

International OCD Foundation

TANIA BORDA Instituto Realize

TANIA BORDA
Instituto Realize

- PhD: Clinical Psychology National University of Buenos Aires University.
- SPECIALIST: OCD, CBT and SPECTRUM disorders
- Clinical director and founder of the "Instituto Realize", Buenos Aires, Argentina.
- PRINCIPAL INVESTIGATOR: Latin American Trans-ancestry Initiative for OCD genomics (LATINO).
- Full Professor: OCD Foundation and Catholic University of Argentina: Department of Psychology.
- MANUSCRIPT REVIEWER: Clinical Psychology and Psichotherapy.
- Presented and published over 30 papers in scientific journals.
- Author of 3 books and multiple chapters in other peer's books.

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0-3 years old

This is the period in which, perhaps, more than in any other, there is a perfect confluence of BODY, MENTAL AND EMOTIONAL CONTROL DEVELOPMENT.

(Vayer, 1977a; 1977b; Berruezo, 1995).

BDD PREVALENCE IN YOUTH

1.7-7%

Phillips 2017; Bjornsson et al., 2013; Mayville et al., 1999; Dyl et al., 2006; Shneider et al., 2016

BDD early onset: (0-20 years old): 66.3 – 67.2%

Phillips, 2017; pág 116

UNDERRECOGNIZED (<12 years old)

BDD IN CHILDREN- SYMPTOMS

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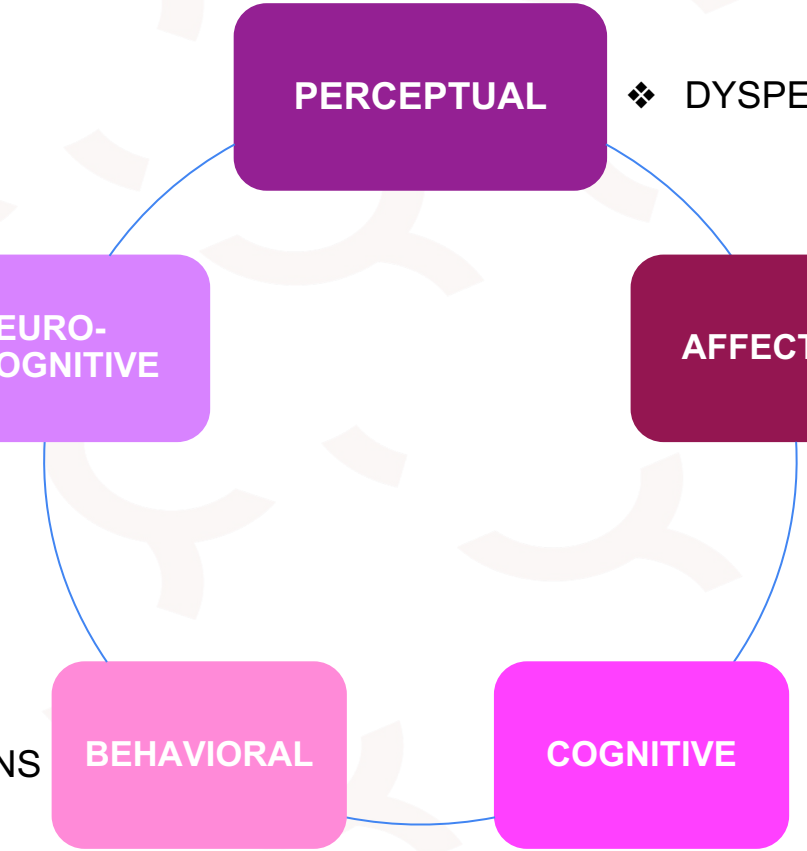


- DYSPERCEPTION

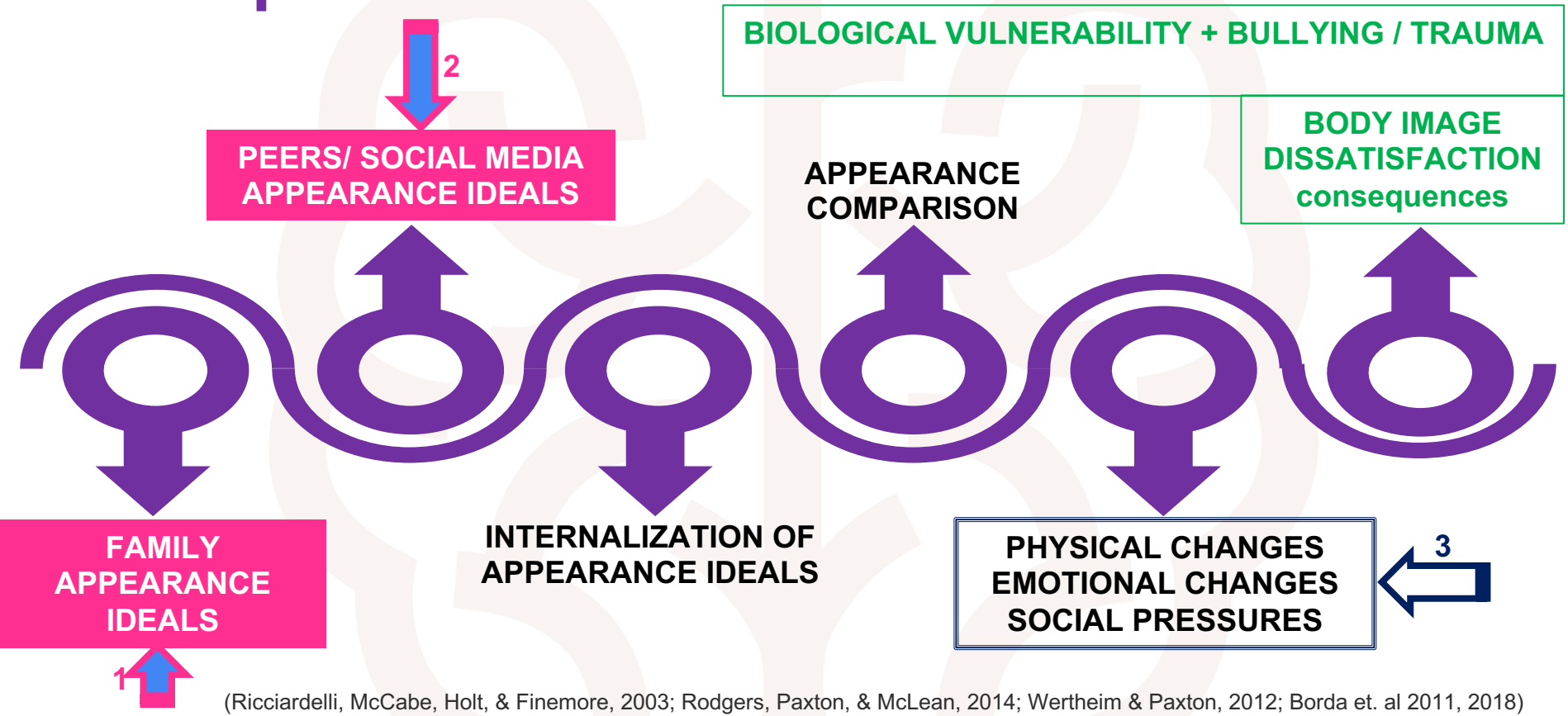
- DEPRESSION,
- ANXIETY,
- LOW SELF-ESTEEM,
- LOW FRUSTRATION and TOLERANCE,
- DISGUST

- OBSESSIVE IDEAS
- OVERVALUED IDEAS
- DELIRIUM

- RITUALS
- COMPULSIONS
- AVOIDANCE

DEFICIT
- SELECTIVE ATTENTION
- EXECUTIVE FUNCTIONS (rigid ideation, making decision difficulty)

IMPACT FACTORS regarding BDD development in children and adolescents

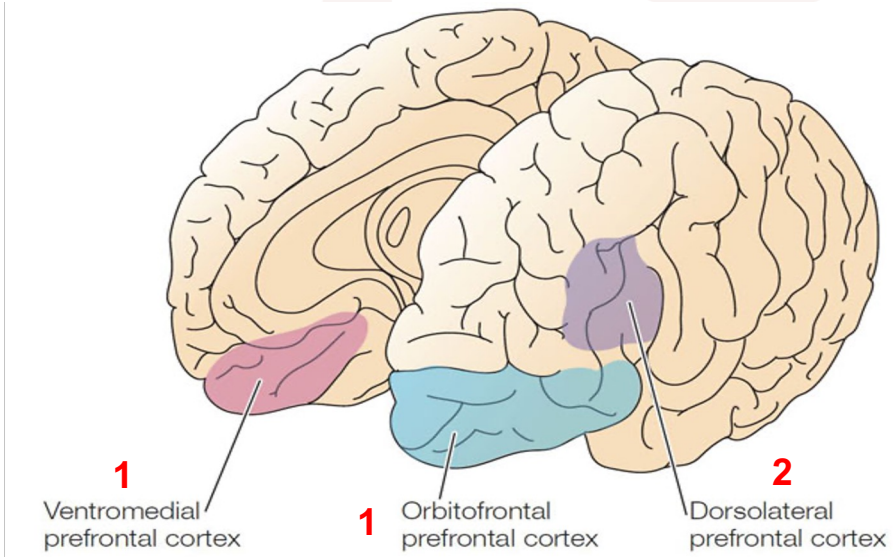


(Ricciardelli, McCabe, Holt, & Finemore, 2003; Rodgers, Paxton, & McLean, 2014; Wertheim & Paxton, 2012; Borda et. al 2011, 2018)

COGNITIVE THEORIES OF EMOTIONS

Wood & Worthington, 2017; David & Matu, 2017; Hybel et al., 2017

EXAMINE MOTIVATIONAL RELEVANCE OF EVENTS,
INDIVIDUAL'S ABILITY TO PRACTICALLY AND EMOTIONALLY COPE WITH THE EVENT
BLAME others IF NEEDED



HOT COGNITIONS[1]	COLD COGNITIONS[2]
EMOTIONALLY SALIENT INFORMATION	**LOGIC REASONING**
▪ emotional and motivational significance behind events	▪ knowledge about the world and self representations about beliefs or single events ▪ forward-looking decision making ▪ self-control efforts
ORBITOFRONTAL AND VENTROMEDIAL PREFRONTAL CORTEX	**DORSOLATERAL PREFRONTAL CORTEX**
EMOTIONAL AND MOTIVATIONAL SIGNIFICANCE • impact on both social cognition and interpersonal behavior • empathy • theory of mind • social judgement • emotional regulation	**EXECUTIVE FUNCTIONING** • shifting attention • response inhibition • working memory • planning • decision making • behavior adaptation to social circumstances • affective interference

BDD NEURO-ANATOMY & COGNITIVE PROCESSES

HYPERMETABOLISM

- AMIGDALA
- ORBITAL FRONTAL CORTEX
- THALAMUS (RIGHT)
- CAUDATE: inappropriate motor inhibition: compulsions/rituals
- OCCIPITAL AND FRONTAL LOBES: visual processing detriments

Bohon et al., 2012; Grace et al., 2017; Dunai et al., 2010; Laubaschagne et al, 2013; Wood & Worthington, 2017; Neurosc, 2016

HOT COGNITIONS

- PART OF THE LIMBIC SYSTEM
- EMOTIONALLY DETERMINED
- SENSORY INTEGRATION OF THALAMUS INFORMATION
- IS RELATED TO SURVIVAL
- QUICK TO ACT
- SEEKS SOLUTIONS IN THE SHORT TERM

COLD COGNITIONS:

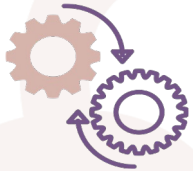
KNOWLEDGE ABOUT THE WORLD AND SELF THAT **DO NOT SPECIFICALLY LEAD TO EMOTIONAL RESPONSES**

- INHIBITORY CONTROL
- FORWARD THINKING
- IMPULSE RESPONSE INHIBITION
- ESTABLISHES PLANS AND DECISIONS TO ACCOMPLISH A GOAL
- FLEXIBILITY

IMPORTANT CONSIDERATIONS

- Typical treatment regimens outlined for BDD patients involve CBT, which focuses on EXPOSURE AND RESPONSE PREVENTION (EPR), combined with PSYCHOPHARMACOLOGICAL treatment. (Kelly & Phillips, 2017; van Passel, et. al., 2016; Neziroglu et al., 2002).

- Research on **CRT+ CBT in OCD** (Park, et. al., 2006) and **Anorexia Nerosa** (AN) (Tchanturia, et al., 2012; Savage, Baer, Keuthen, Brown, Rauch, & Jenke, 1999; Cabrera, McNally, & Savage, 2001; Fiszdon, Bryson, Waxler & Bell, 2004) DEMONSTRATED LESSENED SYMPTOMATOLOGY, IMPROVEMENTS IN COGNITIVE ABILITIES AND LONG-TERM DURABILITY OF THE RESULTS



STUDY AIM

PRIMARY GOAL of this study was to examine in **BDD CHILDREN** if the **ADDITION OF COGNITIVE REHABILITATION TREATMENT (CRT)** to the first line treatment existing **ERP** will have: the most SIGNIFICANT IMPROVEMENTS IN SYMPTOM SEVERITY, EXECUTIVE PERFORMANCE, QUALITY OF LIFE, DUE IN PART TO **BALANCING COLD AND HOT COGNITIVE PROCESSES**

STUDY AIM

BDD GROUP n=16

- 9 boys and 7 girls
- average age: 8.15, range: 5-12.
- onset average age: 7.00
- private school

COMORBIDITIES:

Depression (n=14), Anxiety (n=16), Oppositional Defiant Disorder (n=4), Deficit Hyperactivity Disorder (N=2)

QUESTIONNAIRE PACKAGE

- Mini-International Neuropsychiatric Interview (MINI)
- Body Dysmorphic Disorder Questionnaire (BDDQ-CV)
- The Peer Interaction Questionnaire (PIPS)
- Sheehan Disability Inventory (SDS)
- Spanish version of the Dysexecutive Questionnaire (DEX-sp)

METHOD

PARTICIPANTS UNDERWENT 20 THERAPY SESSIONS.

Sessions 1-4: PATIENT EVALUATION (MINI, BDDQ, BDD-YBOCS, SDS and DEX-sp) and PSYCHOEDUCATION for patient and family.
Session 5: devoted to treatment procedures tailored for each patient, regarding ERP AND CT presparations (importance of body image and cognitive distortions).
Sessions 6-20: patients were RANDOMLY ASSIGNED to either ERP alone or CRT + ERP.

2 GROUPS: A. ERP alone (N = 7) met once a week for 90 minutes.

B. ERP + CRT (N = 9) met twice a week for 150 minutes; 90 minutes of ERP and 60 minutes of CRT

-All patients were given HOMEWORK, FAMILY THERAPY (two session per month - 60 min). SCHOOL INTERVENTION related to bullying and violence one per month (90 min)

METHOD

CBT TOOLS

- EVALUATION (MINI, BDDQ, BDD-YBOCS, SDS and DEX-sp)
- PSYCHOEDUCATION for patient and family.
- treatment procedures tailored for each patient, regarding ERP AND CT (importance of body image and cognitive distortions)
- ERP
- CRT: Participants complete computerized cognitive training activities that are included in the program PSSCogRehab (Bracy 1995) one per week (60 min)
- HOMEWORK, FAMILY THERAPY
- SCHOOL INTERVENTION related to bullying and violence one per month (90 min)

METHOD

CBT TOOLS

CRT:

- This program (PSSCogRehab, spanish version) provides participants with training in 4 areas of cognitive functioning: ATTENTION, VISUAL-SPATIAL ABILITIES, MEMORY, AND PROBLEM-SOLVING ABILITIES.
- Participants initially complete simple training tasks in each domain (FOUNDATIONS I) and, once mastered, gradually progress to more difficult tasks (FOUNDATIONS II). Progression through the system is automatically monitored by the system and each patient can progress at his or her own pace.

- **Foundations I**: exercises designed to train visual and auditory attention skills and integrate these skills with some very basic executive functioning. The tasks address focusing, shifting, sustaining and dividing attention in addition to tracking and targeting. The executive skills demands involve simple discrimination, initiation, inhibition and differential responding.

CBT TOOLS

METHOD

CRT:

- **Foundations II:** each patient attempts exercises about attention, problem-solving exercise, and visuospatial exercises

ATTENTION	PROBLEM SOLVING	VISUOSPATIAL
a. Visual Reaction Multiple Stimuli b. Multiple Attention/Multiple Response c. Complex Attention [Even/Odd] d. Visual Scanning II e. Visual Scanning III f. Simultaneous Multiple Attention g. Detecting Differences h. Stroop Effects i. Serial Addition j. Multiple Simultaneous Addition k. Symbol/Digit Transfer	a. Deduce It b. Pyramids I c. Criss-Cross d. Deductions e. Nines-All-Around f. Checker Exchange	a. Luminosity b. Line Discrimination c. Angle Discrimination d. Design Completion e. Guess Which Design f. Shapes and Patterns g. How Many Blocks?

RESULTS

SCALES	A. GROUP (n=7) boys (n=3)	girls (n=4)	B. GROUP (n=9) boys (n=5)	girls (n=4)
MINI	Depression n=3 Anxiety n=3 ODD n=1 ADD n=1	Depression n=4 Anxietyn n= 4 ODD n=0 ADD n=0	Depression n= 5 Anxiety n= 5 ODD n=2 ADD n=1	Depression n=2 Anxiety n=4 ODD n=1 ADD n=0
PIPS	Victims n=1 Bullies n=2	Victims n=3 Bullies n=1	Victims n=4 Bullies n=1	Victims n=2 Bullies n=2
SDS	academic n=2 social n=3 leisure act. n=3 family n=3	academic n=1 social n=4 leisure act. n=4 family n=3	academic n=5 social n=5 leisure act. n=5 family n=5	academic n=4 social n=4 leisure act. n=4 family n=2

RESULTS

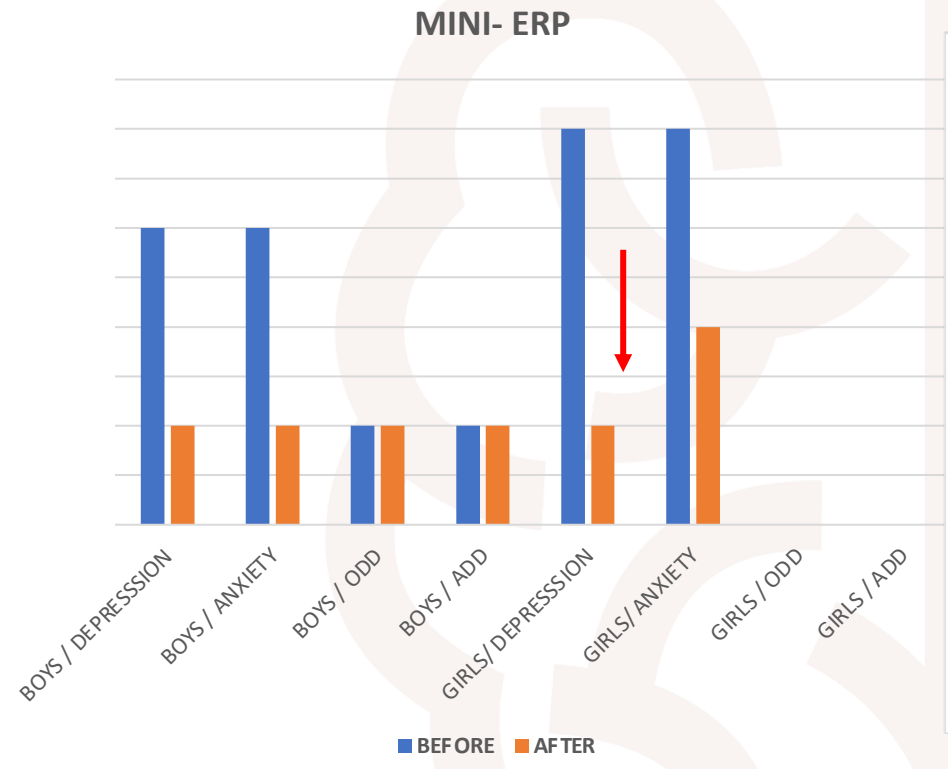
BDD	A. GROUP (n=7)		B. GROUP (n=9)	
	boys (n=3)	girls (n=4)	boys (n=5)	girls (n=4)
AREAS OF CONCERN	• BEING UGLY • SKIN COLOR • EARS • HEIGHT • NOSE	• BEING UGLY • FACE SHAPE • STOMACH • HEIGHT • VOICE • EYES	• BEING UGLY • FACE SHAPE • HAIR • HEIGHT • MUSCULATURE	• FACE SHAPE • SKIN COLOR • EYES • NOSE • MOUTH • LOOKING LIKE HER FATHER

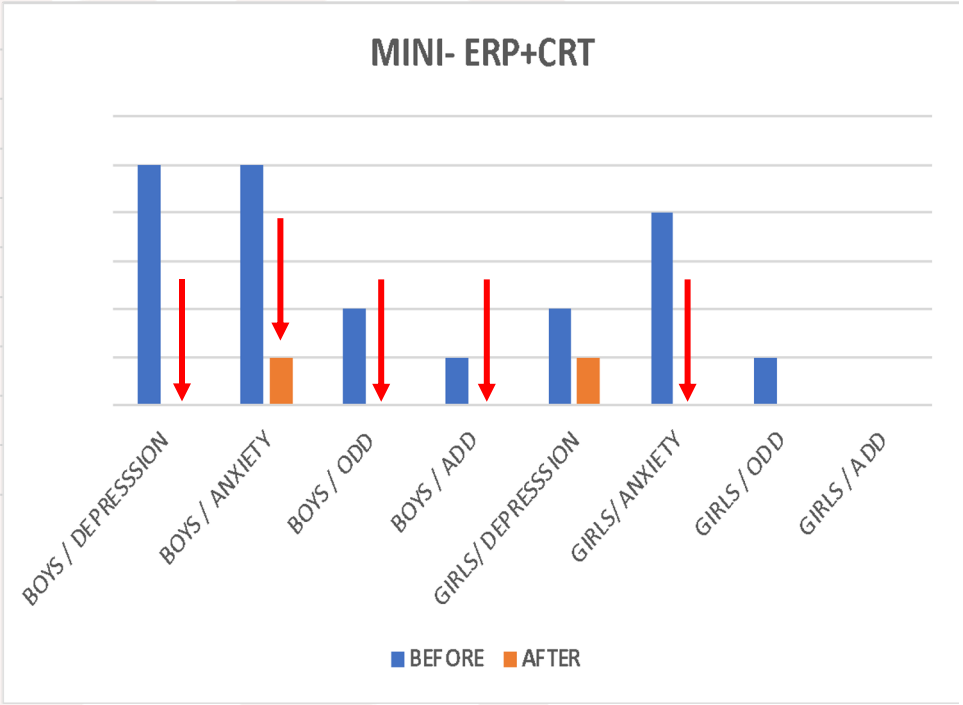
BDD	A. GROUP (n=7) boys (n=3)	girls (n=4)	B. GROUP (n=9) boys (n=5)	girls (n=4)
COMPULSIONS RITUALS	• COMPARING TO OTHERS • HIDING/TAKING PICTURES EXCESSIVELY • PROHIBITING PARENTS FROM GIVING THEIR PHONE NUMBER • NOT INVITING FRIENDS HOME	• COMPARING TO OTHERS • HIDING IN HER ROOM • NOT INVITING FRIENDS HOME • STANDING STILL DURING THE DAY (CAR, HOME, SCHOOL)	• INNAPROPIATE GROOMING • NOT GETTING A HAIRCUT • COMPARING TO OTHERS • HIDING IN HIS ROOM • NOT INVITING FRIENDS HOME • EXCESSIVE PHYSICAL ACTIVITY	• INNAPROPIATE GROOMING • COMPARING TO OTHERS • HIDING/TAKING PICTURES EXCESSIVELY • NOT INVITING FRIENDS HOME
AVOIDANCE	• AVOID GOING TO MEETINGS/SPORTS WITHOUT THEIR PARENTS • AVOID FAMILY MEETINGS / HOLIDAYS • NOT GOING OUT OF CLASS FOR BREAK TIME.	• AVOID GOING TO SCHOOL • COMING TO THE FRONT • AVOID FAMILY MEETINGS / HOLIDAYS • NOT GOING OUT OF CLASS FOR BREAK TIME.	• AVOID GOING TO SCHOOL/ SPECIAL CLASS • COMING TO THE FRONT • AVOID GETTING TEACHER'S ATTENTION. • AVOID FAMILY MEETINGS / HOLIDAYS • NOT GOING OUT OF CLASS FOR BREAK TIME.	• AVOID COMING TO THE FRONT • AVOID FAMILY MEETINGS / HOLIDAYS • NOT GOING OUT OF CLASS FOR BREAK TIME.

RESULTS

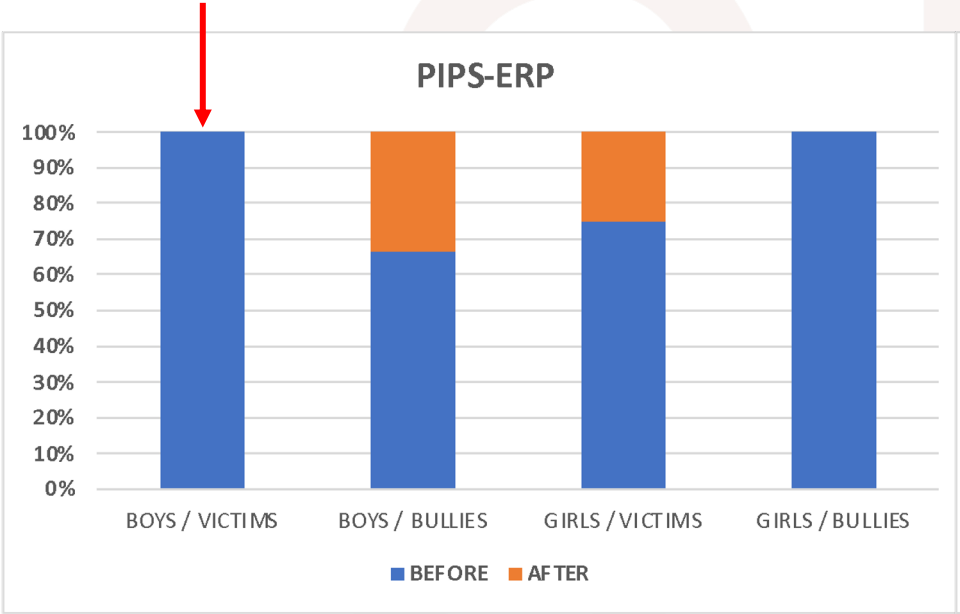
DEX-SP	A. GROUP (n=7) boys (n=3)	girls (n=4)	B. GROUP (n=9) boys (n=5)	girls (n=4)
DEX-EC: executive functioning: planning, regulation, focusing and switching	11 ± 2	13 ± 1	12 ± 1	13 ± 2
DEX-MC awareness and understanding of one's own thought processes;	18 ± 2	17 ± 1	17 ± 2	16 ± 3
DEX-BESR emotional and reward processing, necessary for appropriate adaptive responding to others.	28 ± 2	25 ± 2	27 ± 1	29 ± 2

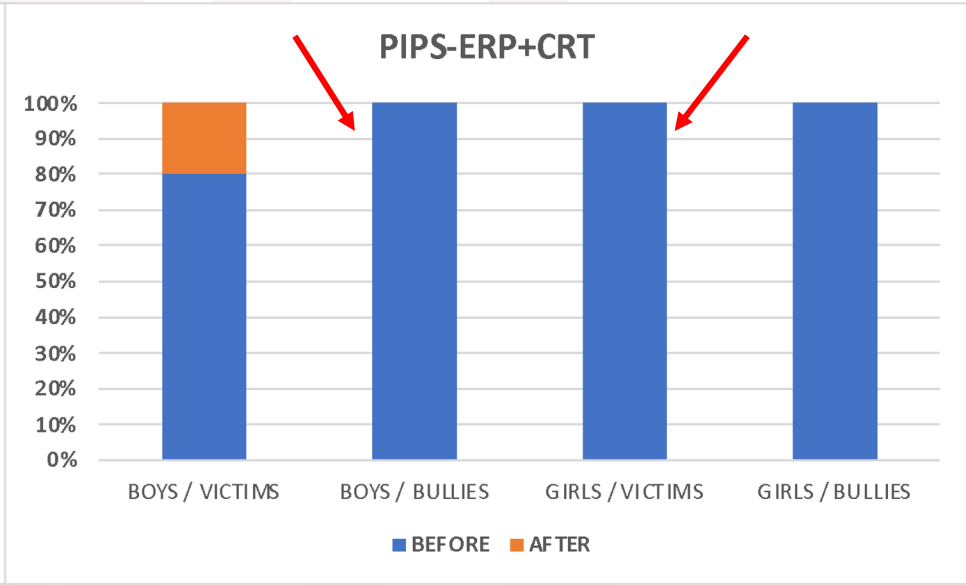
RESULTS


MINI- ERP
BOYS / DEPRESSSION
BOYS / ANXIETY
BOYS / ODD
BOYS / ADD
GIRLS/ DEPRESSSION
GIRLS/ ANXIETY
GIRLS / ODD
GIRLS / ADD
BEFORE
AFTER

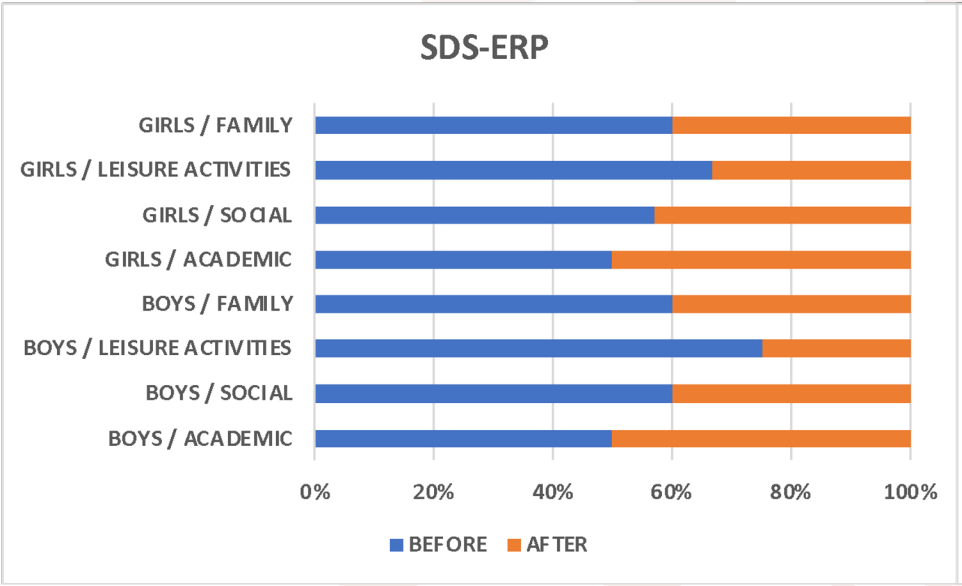

MINI- ERP+CRT
BOYS / DEPRESSSION
BOYS / ANXIETY
BOYS / ODD
BOYS / ADD
GIRLS/ DEPRESSSION
GIRLS/ ANXIETY
GIRLS / ODD
GIRLS / ADD
BEFORE
AFTER

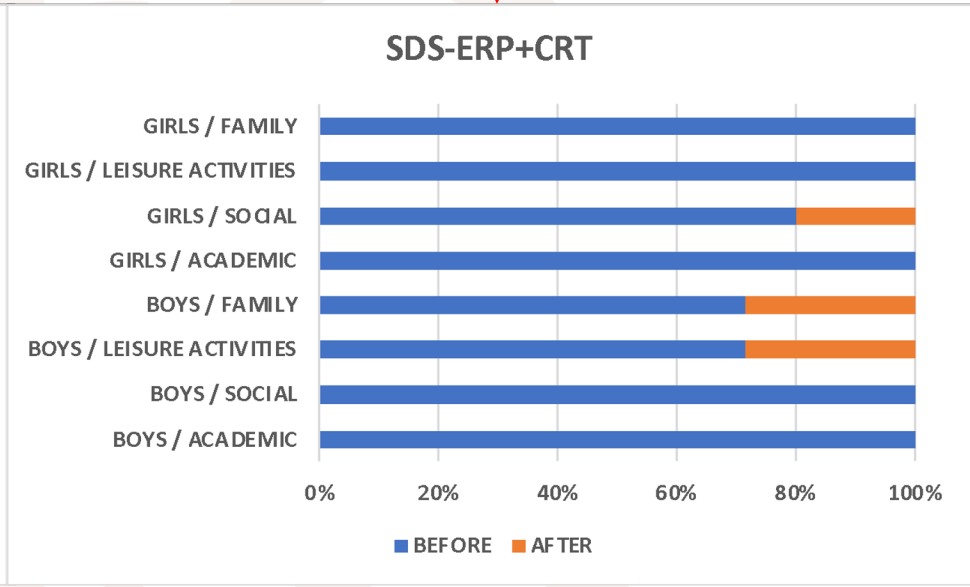
RESULTS


PIPS-ERP
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
BOYS / VICTIMS
BOYS / BULLIES
GIRLS / VICTIMS
GIRLS / BULLIES
BEFORE
AFTER


PIPS-ERP+CRT
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
BOYS / VICTIMS
BOYS / BULLIES
GIRLS / VICTIMS
GIRLS / BULLIES
BEFORE
AFTER

RESULTS


SDS-ERP
GIRLS / FAMILY
GIRLS / LEISURE ACTIVITIES
GIRLS / SOCIAL
GIRLS / ACADEMIC
BOYS / FAMILY
BOYS / LEISURE ACTIVITIES
BOYS / SOCIAL
BOYS / ACADEMIC
0%
20%
40%
60%
80%
100%
BEFORE
AFTER


SDS-ERP+CRT
GIRLS / FAMILY
GIRLS / LEISURE ACTIVITIES
GIRLS / SOCIAL
GIRLS / ACADEMIC
BOYS / FAMILY
BOYS / LEISURE ACTIVITIES
BOYS / SOCIAL
BOYS / ACADEMIC
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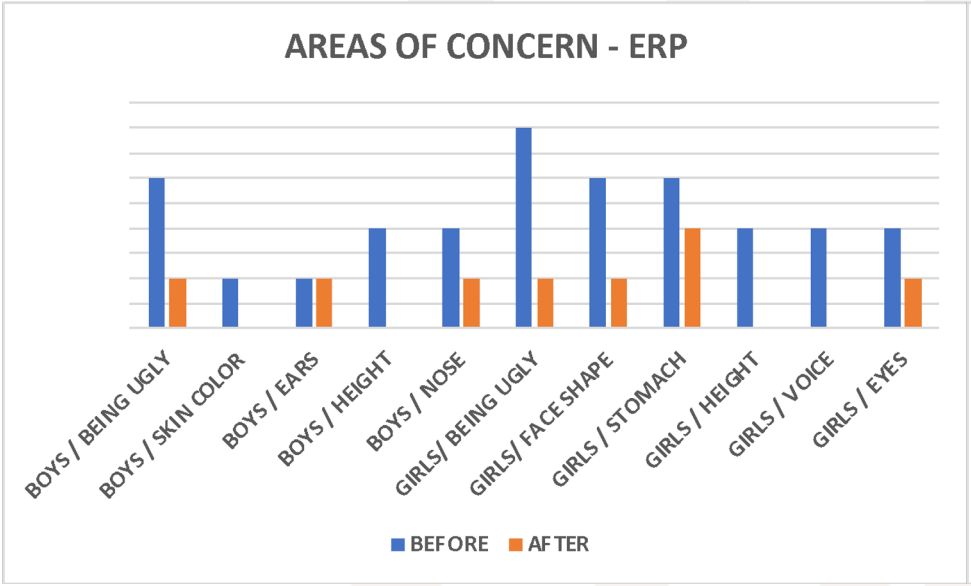
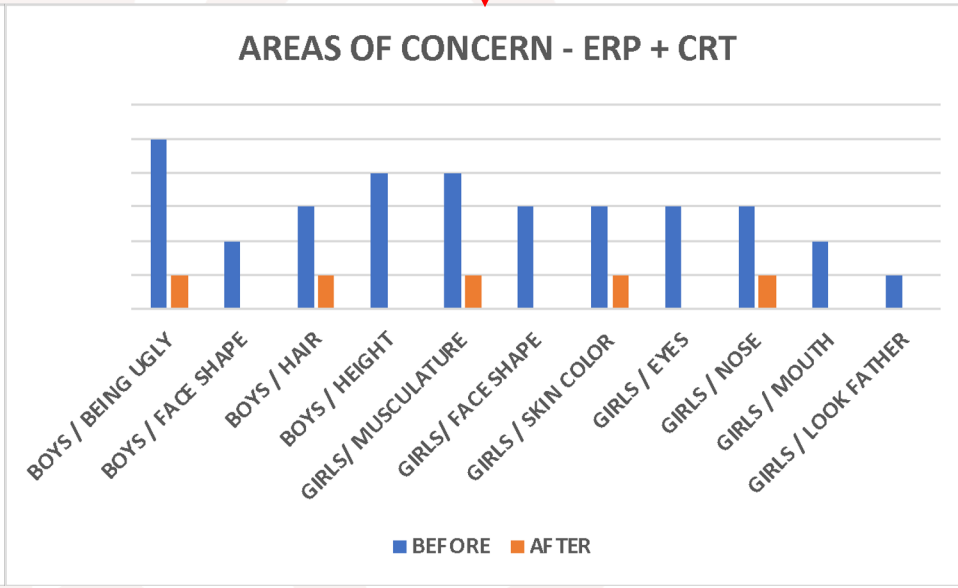
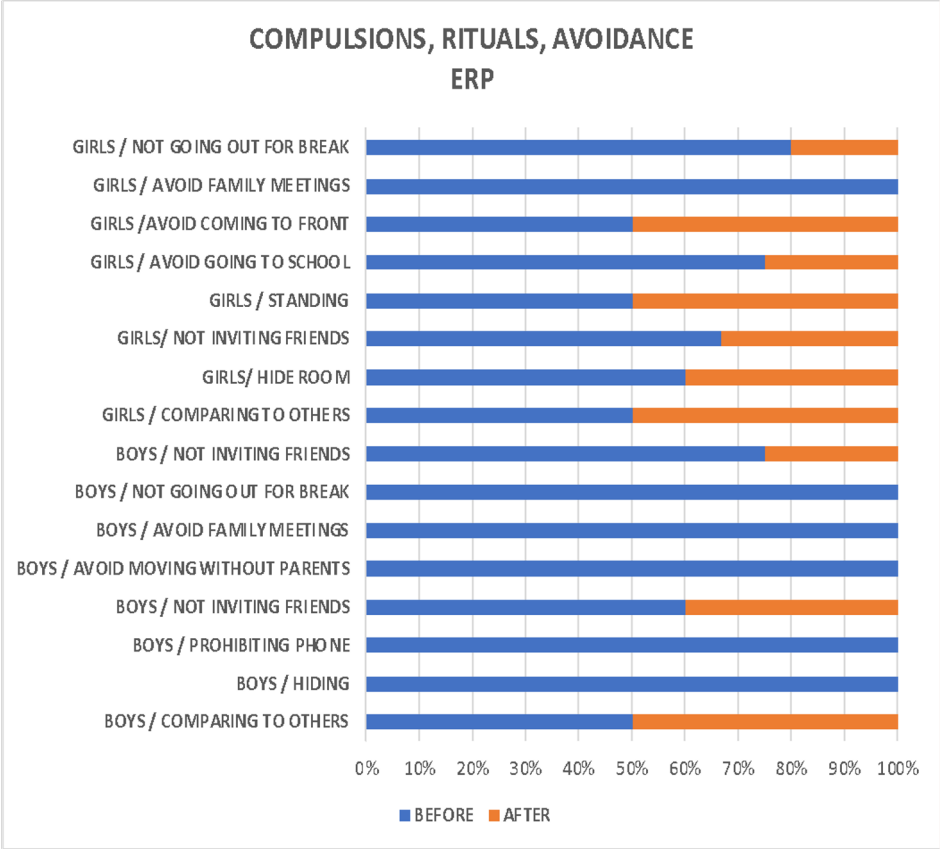
80%
100%
BEFORE
AFTER

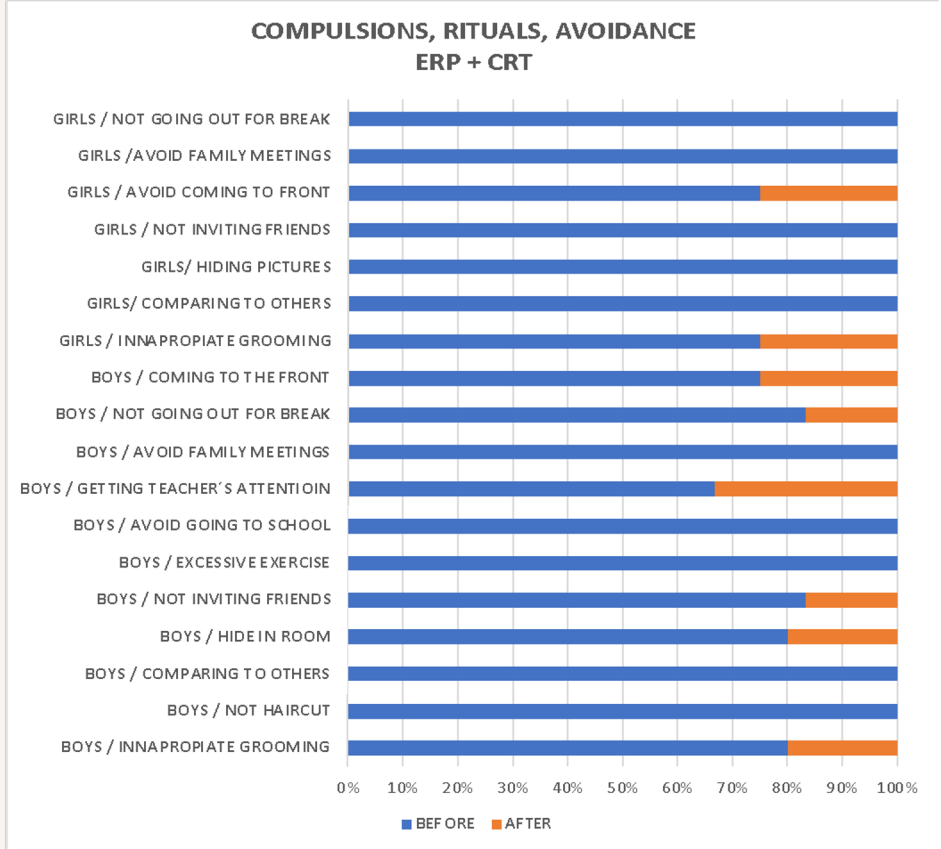
RESULTS


AREAS OF CONCERN - ERP
BOYS / BEING UGLY
BOYS / SKIN COLOR
BOYS / EARS
BOYS / HEIGHT
BOYS / NOSE
GIRLS/ BEING UGLY
GIRLS/ FACE SHAPE
GIRLS / STOMACH
GIRLS / HEIGHT
GIRLS / VOICE
GIRLS / EYES
BEFORE
AFTER


AREAS OF CONCERN - ERP + CRT
BOYS / BEING UGLY
BOYS / FACE SHAPE
BOYS / HAIR
BOYS / HEIGHT
GIRLS/ MUSCULATURE
GIRLS/ FACE SHAPE
GIRLS / SKIN COLOR
GIRLS / EYES
GIRLS / NOSE
GIRLS / MOUTH
GIRLS / LOOK FATHER
BEFORE
AFTER

RESULTS


COMPULSIONS, RITUALS, AVOIDANCE
ERP
GIRLS / NOT GOING OUT FOR BREAK
GIRLS / AVOID FAMILY MEETINGS
GIRLS /AVOID COMING TO FRONT
GIRLS / AVOID GOING TO SCHOOL
GIRLS / STANDING
GIRLS/ NOT INVITING FRIENDS
GIRLS/ HIDE ROOM
GIRLS / COMPARING TO OTHERS
BOYS / NOT INVITING FRIENDS
BOYS / NOT GOING OUT FOR BREAK
BOYS / AVOID FAMILY MEETINGS
BOYS / AVOID MOVING WITHOUT PARENTS
BOYS / NOT INVITING FRIENDS
BOYS / PROHIBITING PHONE
BOYS / HIDING
BOYS / COMPARING TO OTHERS
0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%
BEFORE
AFTER


COMPULSIONS, RITUALS, AVOIDANCE
ERP + CRT
GIRLS / NOT GOING OUT FOR BREAK
GIRLS /AVOID FAMILY MEETINGS
GIRLS / AVOID COMING TO FRONT
GIRLS / NOT INVITING FRIENDS
GIRLS/ HIDING PICTURES
GIRLS/ COMPARING TO OTHERS
GIRLS / INNAPROPIATE GROOMING
BOYS / COMING TO THE FRONT
BOYS / NOT GOING OUT FOR BREAK
BOYS / AVOID FAMILY MEETINGS
BOYS / GETTING TEACHER´S ATTENTIOIN
BOYS / AVOID GOING TO SCHOOL
BOYS / EXCESSIVE EXERCISE
BOYS / NOT INVITING FRIENDS
BOYS / HIDE IN ROOM
BOYS / COMPARING TO OTHERS
BOYS / NOT HAIRCUT
BOYS / INNAPROPIATE GROOMING
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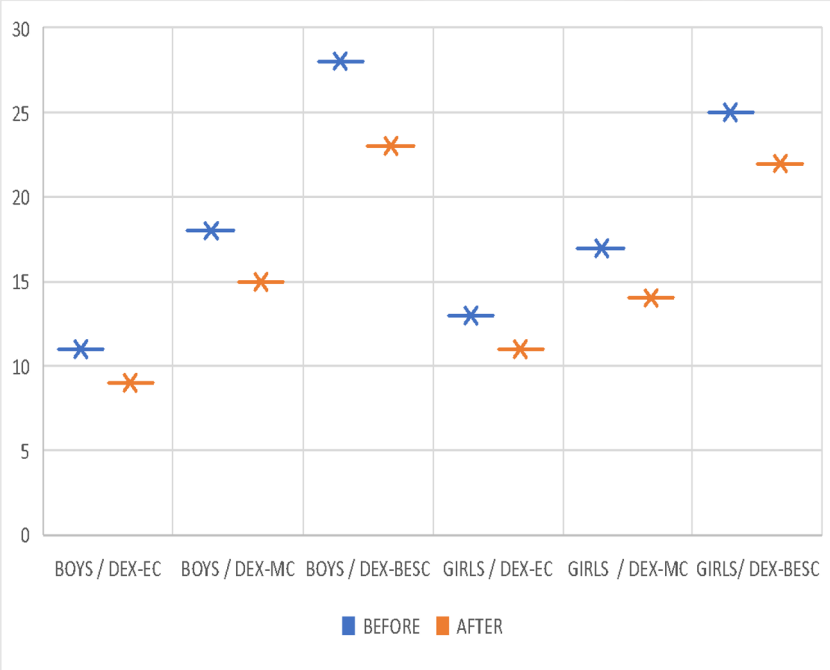
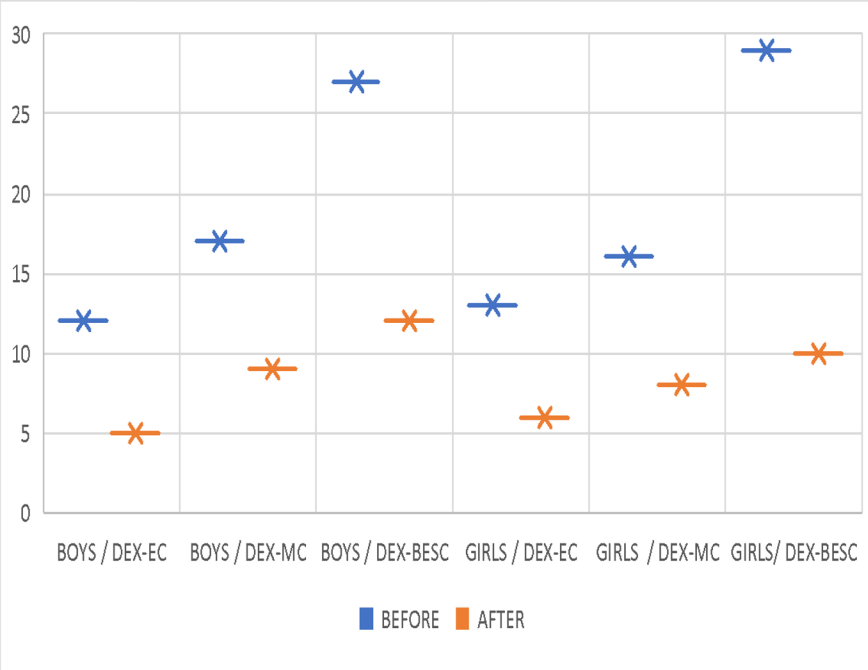
BEFORE
AFTER

RESULTS

DEX - ERP



DEX – ERP + CRT



CONCLUSIONS

➔ **WE HYPOTHESIZED THAT THE ADDITION OF CRT TO AN EXISTING ERP TREATMENT WOULD ENHANCE TREATMENT EFFECT, IN CHILDREN DIAGNOSED WITH BDD, AS "HOTTER" COGNITIONS ARE ESPECIALLY RELEVANT TO SYMPTOM EXPRESSION.**

- THIS WORK DEMONSTRATES THE IMPORTANCE OF HAVING CONDUCTED RESEARCH ON **BOTH FEMALE AND MALE PATIENTS UNDER 12 YEARS OF AGE.**

- A COMPREHENSIVE DESCRIPTION OF **BDD CHILDREN UNDER 12 YEARS OF AGE CLINICAL PRESENTATION** WAS PERFORMED: SYMPTOMS; COMORBIDITIES; DYSFUNCTIONALITY AND PROBLEMS WITH PEERS AND IMPORTANCE - IMPLICATION OF FAMILY BODY IMAGE PREOCCUPATION

CONCLUSIONS

➔ **WE HYPOTHESIZED THAT THE ADDITION OF CRT TO AN EXISTING ERP TREATMENT WOULD ENHANCE TREATMENT EFFECT, IN CHILDREN DIAGNOSED WITH BDD, AS "HOTTER" COGNITIONS ARE ESPECIALLY RELEVANT TO SYMPTOM EXPRESSION.**

- BY EXPANDING THE SCOPE OF THE STUDY AND **WORKING WITH THE PATIENTS' NETWORKS (FAMILY, PARENTS, AND SCHOOL),** AN IMPROVEMENT IN THE CONDITION IS ENSURED.

- **CRT** (REHACOM PROGRAM) **INCREASES FLEXIBILITY** MAKING A USEFUL CONTRIBUTION TO CLINICAL PRACTICE

- FURTHERMORE, IT CONTRIBUTES TO AND **DEVELOPS THE CONCEPT OF 'HOT COGNITIONS AND COLD COGNITIONS.'** THIS CONCEPT PROVIDES A FUNDAMENTAL CONTRIBUTION TO THE BDD PATHOLOGY AND, CONSEQUENTLY, ITS TREATMENT.

CONCLUSIONS

➔ **WE HYPOTHESIZED THAT THE ADDITION OF CRT TO AN EXISTING ERP TREATMENT WOULD ENHANCE TREATMENT EFFECT, IN CHILDREN DIAGNOSED WITH BDD, AS "HOTTER" COGNITIONS ARE ESPECIALLY RELEVANT TO SYMPTOM EXPRESSION.**

❖ THROUGH **NEUROCOGNITIVE REHABILITATION**, THE FACILITATION OF **SWITCHING BETWEEN "HOT TO COLD" COGNITIONS** WAS ACHIEVED (A SITUATION THAT IS IMPAIRED OR DIMINISHED IN PATIENTS WITH BDD).

❖ THE ANALYSES PRESENTED HERE INDICATE THAT **CRT ADDED TO ERP ENHANCES TREATMENT**. THE EFFECTIVENESS OF EACH TREATMENT (ERP ALONE VS ERP + CRT) WAS MEASURED BY COMPARING THE RESULTS OF THE NEUROPSYCHOLOGICAL EXAMINATIONS (DEX-SP) SYMPTOM SEVERITY SCALES (BDDQ-CV), COMORBIDITIES (MINI), PEERS RELATIONSHIP (PIPS) AND QUALITY OF LIFE (SDS) BEFORE AND AFTER TREATMENT.

CONCLUSIONS

- **IT IS IMPORTANT TO BE ABLE TO RECOGNIZE BDD FROM EARLY AGES TO ENSURE PROPER TREATMENT OF THE CONDITION, IN ORDER TO IMPROVE ITS PROGNOSIS AND PROGRESSION.**

- **EARLY IDENTIFICATION OF BDD AND EMERGING BDD SYMPTOMS WOULD LEAD TO EARLIER TREATMENT INTERVENTION, WHICH WOULD HOPEFULLY PREVENT THE SUICIDALITY AND DEPRESSION. IT WOULD HELP CHILDREN MAINTAIN THEIR SOCIAL/DEVELOPMENTAL/ACADEMIC GOALS SO THEY DON'T FALL BEHIND. DECREASE THE MISDIAGNOSIS OF BDD FOR SOCIAL ANXIETY, SCHOOL REFUSAL, DEPRESSION, ETC.**

- Limitations are related to the small sample size used, which prevented statistical analysis and required an observational population-based research approach.

International OCD Foundation

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