

# SUBCLINICAL POSTTRAUMATIC STRESS SYMPTOMS IN CHILDREN AFTER A LOW IMPACT EVENT

- AN TWO SAMPLE EXPLORATORY STUDY-

INGEBORG PORCAR | 2013, SEPTEMBER

UAB - Barcelona, Spain

#### **CONTENT**

#### 1. INTRODUCTION:

- State of art
- Goals
- Critical events

#### 2. METHOD:

- Common aspects
- Procedure

#### 3. RESULTS & DISCUSSION:

- Answers
- Limitations
- Implications

#### **STATE OF ART**

#### Bibliographical review

#### 1. PARTICULARITIES OF PTSD:

- It is the only disorder which includes all etiologic factor as a diagnostic criterion.
- Disorder recently added into DSM:
- DSM III (1980) for general population.
- DSM III TR (1987) for children.

#### 2. THE DISCUSSION ON CRITERION A:

- Follow-up studies after September 11, 2004's Tsunami and Hurricane Katrina in 2005 indicate stress in not directly affected kids, after more than three months
- Research on low-impact stressors (Kilpatrick et al., 1998) indicate significant effects.
- Is it possible that everyday emergencies, not included in the criteria, can also generate ASD and PTSD?

#### 3. GAP's:

- Which is the real prevalence of PTSD in children?
- Dalgleish, Meiser-Stedman & Smith (2005) > 0 to 100%.
- Which are the best thresholds for PTSD diagnosis?
- Which are the most significant protective and risk factors:

#### **RECOMMENDATIONS:**

(Dalgleish et al, 2005)

- Compare only affected and survivors of similar stressors and impacts.
- Use standardized and agile measures.
- Stratify samples in order to be able to compare the results.
- Avoid publication bias.

#### **OBJECTIVES**

Research questions

GENERALL OBIECTIVE:

To study stress reactions and PTSD symptoms in **two samples** of children aged from 3 to 12 years **3 months after** a **low-impact** critical incident.

SPECIFIC OBJJECTIVES:

ESTIMATE
PREVALENCE OF PTSD
SYMPTOMS

Evaluating the presence of PTSD symptoms and subclinical diagnosis using parental reports.

EVALUATE THE SCHOOL'S DISPOSITION

To participate in programs of **preventive monitoring** following a critical incident using the model Fleur de Lis ™(Cohen, Jaycox, Walker; Mannarino, Langley & Duclos, 2009).

RATE THE APLICABILITY OF 2 SCREENING SCALES

Of Laso, Bonillo & Jané (2012) in affected population of **preschool education** and **primary education**.

EVALUTAE RISK FACTORS

That affect the development of PTSD.

#### STUDIED CRITICAL INCIDENTS

#### Characteristics



- Declared a biosphere reserve by UNESCO.
- The volcano began the activity in September 9<sup>th</sup>, 2011 and was productive until March 2012.
- From **September**, **23th to 28th** there were over 1000 earthquakes; 40 were clearly perceived by the population.
- The strongest earthquake was on **October 8th,2011** and resulted in a submarine eruption.
- The village of La Restinga (547 pers.) was evacuated twice,
   10.10.2011 and 11.05.2011



#### **LLERS**:

- On July 22th, 2012 two wildfires started in the Alt Empordà (north of Barcelona)
- The first began in La Jonquera. It affected the area of Llers and could not be extinguished until 6 days later.
- It burned 13.963 acres in which there are 19 villages.
- It produced two deaths (one in Llers) and 31 wounded.
- About 500 people were evacuated.
- In the case of Llers, 80% of the municipal territory was burned.

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#### **METHOD**

#### Common aspects

#### **LEGAL ASPECTS**

- Coordination and reliance on the Educational Inspection.
- Legal difficulty (= IMPOSSIBILITY) to work with children in the classroom.

#### **ETHICS AND CONSENT**

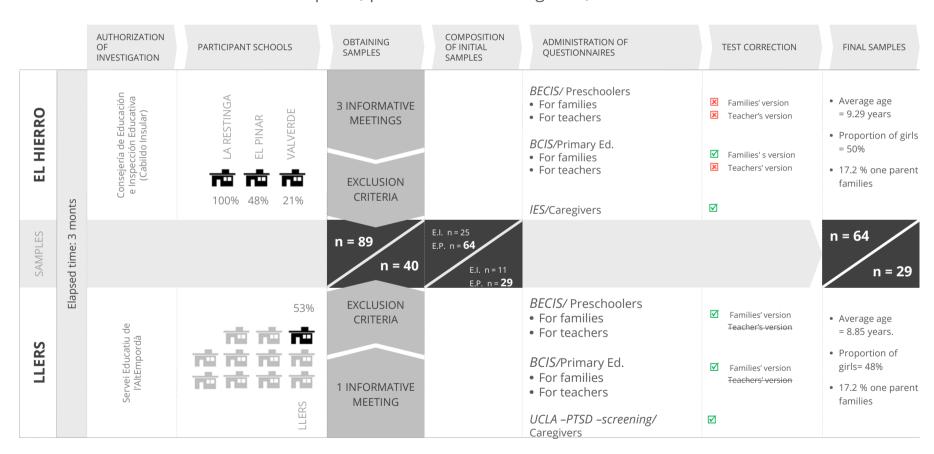
- Approval of the research
- Obtaining informed consent, signed by the legal guardian.
- Guarantee of custody of the collected information

#### **STATISTICAL ANALYSIS**

- SPSS 19.0 for Windows.
- In all analyses, the level of significance was p <. 05.

#### **PROCEDURE**

#### Participants, phases of the investigation, measures



#### **CONTEND**

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#### 2. METHOD:

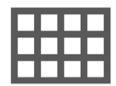
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#### **ANSWERS TO THE RESEARCH QUESTIONS**

ESTIMATE
PREVALENCE OF PTSD
SYMPTOMS



Table

PTSD Criterion or

Diagnosis

ASSESS SCHOOLS' READINESS



RATE APLICABILITY OF BECIS/BCIS



**EVALUATE RISK FACTORS** 



## ANSWERS TO THE RESEARCH QUESTIONS (1/4) Prevalence of PTAD symptoms

	Sampl	e "El Hierro" N = 64	Sample "Llers" N= 29	
PTSD Criterion or Diagnosis	n/vn	a %	n/nv	<sup>a</sup> %
DSM IV TR criteria:				
Criterion B (reexperiencing)	17/47	<b>36.2%</b> [22-50]	9/21	43%
Criterion C (avoidance/numbing symptoms)				
Three	17/47	<b>3.1%</b> [0-7.5]	1/29	3.4%
Two	2/64	<b>10.9%</b> [3.08-18.8]	4/25	13.8%
One	17/49	<b>34.7%</b> [21-49]	10/25	40%
Criterion D (hyperarousal symptoms)				
Two	6/46	<b>13%</b> [3-23]	3/23	13%
One	12/64	<b>18.8%</b> [8.92-28.58]	8/29	27.6%
Criterion F (impairment symptoms)				
Two	11/48	<b>22.9%</b> [11-35]	4/22	18.2%
One	13/64	<b>20.3%</b> [10.2-30.44]	7/29	24.1%
DSM IV-TR diagnosis of PTSD:				
(one B, three C, two D, two F symptoms)	2/64	<b>3.1%</b> [0-8]	1/29	3.4%
Alternative thresholds for PTSD diagnosis:				
One B, one C, two D, two F criterion symptoms (Scheeringa et al.,2003)	3/47	<b>6.4%</b> [0-14]	2/23	8.7%
One B, two C, two D, two F criterion symptoms	3/64	<b>4.7%</b> [0-10]	2/29	6.9%
One B, two C, one D, two F criterion symptoms	3/64	<b>4.7%</b> [0-10]	2/29	6.9%
One B, one C, one D, two F criterion symptoms	3/64	<b>4.7%</b> [0-10]	2/29	6.9%

#### **ANSWERS TO THE RESEARCH QUESTIONS (2/4)**

#### School's readiness

#### **IN TERMS OF TEACHERS**

- Their reports had no validity.
- But they have an important role:
  - Collect the data.
  - Guaranty confidentiality & custody information.

#### **IN TERMS OF FAMILIES**

• Families are willing to collaborate:

> CEIP La Restinga 100%

> CEIP Taibique/El Pinar 48%

> CEIP Valverde 21%

> CEIP Llers 53%

• Their responses are valid.

### **ANSWERS TO THE RESEARCH QUESTIONS (3/4)**

Aplicability of BECIS/BCIS in choosen samples

		EL H	IIERRO		LLERS
Scale	Version	Total <sup>1</sup>	Subscales	Tota	l Subscales
		_			
BECIS	Families	0.69	0.21-0.72	0.94	0.81-0.99
	Teachers	0.45	0.23-0.56		
BCIS	Families	0.74	0.60-0.96	0.72	0.58-0.96
	Teachers	0.36	0.18-0.56		

<sup>&</sup>lt;sup>1</sup> The values correspond to calculations made on Cronbach's Alpha.

#### **ANSWERS TO THE RESEARCH QUESTIONS (4/4)**

Study 1: El Hierro

#### **Exploratory Simple Linear Regressions**

Potential risk factors:

SIGNIFICANT	NON SIGNIFICANT
<ul> <li>Preventive evacuation</li> <li>Number of PTSD symptoms in principal caregiver:</li> </ul>	<ul> <li>Age</li> <li>Gender</li> <li>Previous stressful life events</li> <li>Previous psychological assistance</li> </ul>

#### **Multiple Linear Regression**

Variables introduced in the model:

- Preventive evacuation (EvPre)
- Number of PTSD symptoms in principal caregiver (PTIES)
- Interaction EvPre x PTIES

The model is **significant(**F = 12.437, df = 3,54, p<.0005) .It explains **37.6%** of variance.

Interaction is significant (p=.009). It says that the number of PTSD symptoms in the principal caregiver is only significant in **children** who have been **evacuated** from home

#### **LIMITATIONS**

Auto-selected samples

**SELECTION BIAS** 

Screening only reported by one of the parents/caregivers

PRESENCE OF FALSE POSITIVES AND NEGATIVES

Small samples

THE GENERALIZATION TO THE PUBLIC MAY BE COMPROMISED, DESPITE ACHIEVING STATISTICAL SIGNIFICANCE

#### **ACKNOWLEDGEMENTS**

We express our gratitude to:

#### ALL SCHOOLS:

- Escuela Unitaria de La Restinga
- CEIP Taibique El Pinar
- CEIP Valverde
- CEIP Llers

## EDUCATIONAL INSPECTIONS:

Consejería de Educación e Inspección Educativa (Cabildo Insular)

Servei Educatiu de l'Alt Empordà

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