Abstract Text:

Objective:

The Post-Traumatic Stress Disorder (PTSD) is one person’s response to an abnormal critical event which could attempt on the personal safety, such as natural disaster (earthquake, flood, hurricane…), man-made disasters (fires, sinking, aircrashes…), accidents, violent personal assaults or military combat. People at risk of PTSD may be not only who is directly involved in the horrific event, but also witnesses, perpetrators and those who help PTSD sufferers. The characteristic symptoms are: re-experiencing symptoms (flashbacks—reliving the trauma over and over, including physical symptoms, bad dreams and frightening thoughts), avoidance symptoms (staying away from reminders of the trauma, emotional numbness, feeling strong guilt, depression, or worry, losing interest in activities that were enjoyable in the past) and hyperarousal symptoms (being easily startled, sense of tense, having difficulty sleeping and/or having angry outbursts) (NICE 2005).

Epidemiological studies report very large range of prevalence/incidence of PTSD (Yule & Smith, 2008; Rodin & van Ommeren, 2009; Attanayake et al, 2009). A recent, more robust survey reveals a prevalence around 13-25% among postconflict populations worldwide (Steele et al. 2009). The available estimates of PTSD prevalence and incidence mostly rely on USA and Australian population of adolescents and/or adults.

We draw a multicentric study in order to estimate the prevalence of PTSD in children and adolescents after 12-24 months from the earthquake that hit L’Aquila on 6th April 2009. The study also aims to obtain information on adaptation skills, behavioral and emotional problems of children and adolescents.

Background:

it is natural that dangerous events may determine psychological suffering and emotional reactions in most of the people. Many people, even when exposed to potentially traumatic events, undergo only transient emotional reactions, whereas a minority may suffer the acute stress disorder (DAS) and the PTSD.

PTSD symptoms mostly overlap with depression and anxiety. It has been noted that 84% of individuals with PTSD meet criteria for at least another psychiatric disorder (Brunet A. et al., 2007).

Several epidemiological studies have noted that over 50% of the population is exposed to a traumatic event in lifetime (AAV., 2007). Women not only tend to experience higher impact events (although men are more exposed to traumatic events) but are more likely to develop PTSD in response to a traumatic event than men; this enhanced risk is not explained by differences in the type of traumatic event (Kessler et al, 1995). Incidence data are reported to be 8.1% for men and 20.4% for women. A higher risk has been reported for young people
Prior to 1950 there were few systematic works on the effects of trauma in children and adolescents, while the literature on the effects of stress in adults is extremely extensive. At the beginning PTSD was recognized as a psychological disorder associated only with war veterans, but it is now clear its relationship with different types of both individual and collective trauma, such as abuse, kidnapping, natural and man-made disasters, accidents.


Since 1987, when the diagnosis of PTSD has also been extended to the developmental age, we used a variety of methods to study the reaction of youth to potential stressful factors. Within the field of trauma in children, there is a continuing debate on the presence or absence of specific symptoms in young people exposed to trauma and on the need to establish separate criteria for the developmental age. Since the diagnosis of PTSD was introduced as a formal diagnosis in DSM-III, post-traumatic symptoms in young people are considered using the same criteria identified for adults. In DSM-IV additional criteria were introduced for children: agitation and disorganized behavior, nightmares and recollection of trauma details. These criteria are also present in the DSM-IV-TR.

In children and adolescents symptoms may include typical responses to stress such as nightmares, fear and generalized anxiety reactions; however, the symptoms may also be specific to the age of development, such as commemoration of the event, behavioral regression, separation anxiety and impairment of the forms of behavior, of school life and somatic problems (Silverman & La Greca, 2002). [American Academy of Child and Adolescent Psychiatry (AACAP) Official Action: Practice Parameters, 1998, Drake, Bush, & van Gorp, 2001; Pfefferbaum, 1997]

To date, no population-based epidemiological study has examined the prevalence of PTSD among children. Prevalence estimates from studies focusing on high-risk children who experienced a traumatic event indicate that children may have a higher prevalence of PTSD than adults in the general population (Gabbay et al., 2004).

For example, a study conducted in Palestine showed that 54% of the children suffered from severe, 33.5% from moderate and 11% from mild and doubtful levels of PTSD. Girls were more vulnerable; 58% of them suffered from severe PTSD, and none scored on the mild or doubtful levels of PTSD.(Samir Qouta et al, 2003).

Green et al. (1991) showed fewer PTSD symptoms in the youngest age group and higher symptom levels for girls than boys. Approximately 37% of the children were given a “probable” diagnosis of PTSD. Multiple regression analysis showed that life threat, gender, parental psychopathology, and an irritable and/or depressed family atmosphere all contributed to the prediction of PTSD symptoms in the children.

Remarkable is the heterogeneity of incidence estimates of PTSD in children exposed to trauma related to methodological differences in studies and different kinds of traumatic events.

Many Italian regions are at risk for earthquake and natural disasters. On the 6th of April 2009 a terrible earthquake struck the city of L’Aquila, involving other territories in Abruzzo district at a certain degree. There have been 309 victims and many hundreds of injured people. 30.000 persons were forced to leave their places. Few informations are available in Italy on the psychological impact and the facilitating or protective factors of PTSD on children and adolescents at a distance of more than 6 months since a disaster like that.

In a society like ours, with particular care and interest in children and adolescents, it is essential to have a framework to assess the effects of unexpected events that may also interfere with the normal process of growth from childhood to adulthood.

Methods:

The study is divided in two phases, the first after 12 months and second one after 24 months.

54 pediatricians spontaneously participated to our study. They were asked to recruit children and adolescents between 3 and 14 years of age among their patients in order to obtain a randomized sample of 7182 subjects to be examined.

Exclusion criteria were: children of an age not comprised between 3 and 14 years and those whose parents did not accept to participate to the study.

Participants gave informant consent.

Children were divided into two groups of age: 3-5 years and 6-14 years. Between April and August 2010, pediatricians instructed the parents to fill the following tests: Child Behavior checklist (CBCL 1,5-5 and 6/18, Achenbach & Rescorla 2000, 2001) and Parents on the mirror, a questionnaire evaluating the parent’s social
adaptation and exploring cognitive intelligence (how he/she feels and thinks in situations and which are the thoughts and processes guiding the educational relationship), emotional intelligence (emotions, feelings, affects and their influence in the educational relationship) and social intelligence (interactive behaviours in the educational relationship).

Every week the paediatricians sent via courier the filled forms that then entered in a database. After approximately 15 days a feedback on the test results were given to the pediatricians. Whenever a test resulted positive, they sent the child to the neuropsychiatrist in order to undergo a complete diagnostic examination.

The second phase took place from August 2010 to April 2011. Clinical psychologist and neuropsychiatrist carried out a deep diagnostic examination to children and adolescent in presence of parents or caregivers. The assessment protocol was composed of CBCL and K-SADS (a semi-structured diagnostic interview to assess current episodes of psychopathology in children and adolescents according to DSM-IV criteria, Kaufman, Birmaher, Brent, Rao & Ryan, 2001).

Children were divided into two groups of age: 3-5 years and 6-14 years

Results:

Phase 1-Among the 54 paediatricians, 17 (31%) quit the program, so that the expected sample to be enrolled by the remaining 37 of them was 4921 children. Finally, the rate of response (number of enrolled children/number of expected children * 100) was 36%, for a total of 1769 participants.

The sample comprised 555 children aged 3-5 years (50% m and 50% f) and 1214 children and adolescent aged 6-14 years old. Mean age was 7.8 years.

At 3-5 years of age on the CBCL scales for externalizing, internalizing and total problems and on the DSM-oriented scale there are no differences among children from L'Aquila and other locations in Abruzzo. The most represented disturbance results to be anxiety, whose prevalence is 3-6%.

In the sample 6-14 aged total prevalence of disturbances is 6.8%. Children and adolescents from L'Aquila show higher scores on internalizing, externalizing and total problems and on Affectivity (p=0.004) and Anxiety (p=0.047) DSM-oriented scales compared to children and adolescents from other locations in Abruzzo.

Phase 2- Only 319 children and adolescent accepted to undergo to complete diagnostic assessment. The sample comprised 40 children 3-5 aged (52%m and 48% f) and 279 children and adolescents 6-14 aged (49% m and 51% f). Mean age is 9.3 years old.

No children from L'Aquila were in the group 3-5.

Results show a decrease in the percentage scores on internalizing, externalizing and total problem scales and DSM-oriented scales in both group.

In the 3-5 group mental disorder prevalence is 37.5%; 35% of the sample are affected by anxiety and 10% by Behavioral disorders. 2.5% suffered of PTSD.

In the group 6-14 group the prevalence of mental disorders is 38%. Only 1.8% suffered of PTSD. Results show that children and adolescent from L'Aquila are most affected by mental disorders after 24 months of traumatic event.

Conclusions:

this study shows the sequeale of a traumatic event on children and adolescents after 12 and 24 months and how at such temporal distance disturbances such as anxiety, affectivity and behavioral disorders may persist

Bibliography:


Steel Z., Chey T., Silove D., Marnane C., Bryant R.A van Ommeren, M. (2009). Association of Torture and Other Potentially Traumatic Events With Mental Health Outcomes Among Populations Exposed to Mass Conflict and
Proceedings Abstract: Objectives: The PTSD is a psychopathological condition that may occur in subjects exposed to a traumatic external factor at high risk of death or of severe damage to the persons involved. Few studies have been carried out on children about this subject, reporting very variable estimates on prevalence of PTSD in this population. The aim of the study is to investigate the prevalence of PTSD in a sample of Italian children (3-14 years) after 12 months since an earthquake. Methods: The sample included 1769 children. The parents were asked to fill the following materials: CBCL (Italian version, Achenbach & Rescorla 2000, 2001), Parents at the mirror (a test evaluating the parents’ social adaptation) and an anamnestic module. Results: Results highlight that at 3-5 years of age the prevalence of psychopathology is 5.4%, anxiety being the most frequent disturbance (6.5%). There are no significant differences between children from L’Aquila (the earthquake epicentre) and the ones living in other cities in the district. At 6-14 years the prevalence of total disturbances is 6.6%. There is a significant difference, in this range of age, between children from L’Aquila and those who come from the rest of the district relative to anxiety (11.0% vs 6.6%), depression (7.7% vs 3.1%) and PTSD (7.1% vs 2.2%). Conclusions: Prevalence of PTSD in children from L’Aquila at 12 months since the earthquake is significantly higher than peers from other cities in the region. Conclusion In light of this result, we firmly advocate an accurate monitoring of post-trauma psychological effects in the middle and long term in children.
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