

POST-TRAUMATIC STRESS DISORDER IN VICTIMS OF TRAUMATIC EVENTS

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The present study obtained data on frequency of Post-traumatic Stress Disorder (PTSD) symptoms, victims' gender and age, type of trauma and diagnostic comorbidity in a sample of 274 subjects (77 male and 197 female), victims of a severe traumatic event. The Checklist of Stressful and Traumatic Events, Trauma Assessment for Adults (TAA) Revised, Structured Interview for PTSD (SIP), Beck Depression Inventory (BDI) and State-Trait Anxiety Inventory (STAI) were used. Results indicated that 28% of the subjects met the criteria for Posttraumatic Stress Disorder, and that females were more likely than males to receive the PTSD classification. Significant differences were found in the PTSD diagnoses related to type of traumatic event and depression and anxiety symptoms.

En la presente investigación se obtuvieron datos sobre la frecuencia de los síntomas del Trastorno por Estrés Postraumático (TEPT), género de las víctimas, edad, tipo de trauma sufrido y otros diagnósticos psicopatológicos asociados en una muestra de 274 sujetos (77 varones y 197 mujeres), que fueron víctimas de una situación traumática grave. Se utilizó el Listado de situaciones traumáticas y estresantes, la Evaluación de Trauma para Adultos (TAA) Revisada, la Entrevista Estructurada para TEPT (SIP), el Inventario de Depresión de Beck (BDI) y el Inventario de Ansiedad Estado-Rasgo (STAI). Los resultados indicaron que el 28.8% de los sujetos evaluados cumplió los criterios del TEPT y las mujeres fueron diagnosticadas de TEPT en una proporción mayor que los varones. Se observaron diferencias estadísticamente significativas en el cumplimiento de los criterios de diagnóstico del TEPT con relación al tipo de trauma sufrido y a la sintomatología en depresión y ansiedad.

Post-traumatic Stress Disorder (PTSD) constitutes the basic psychopathological axis around which trauma revolves. While interest in this disorder is by no means a recent phenomenon – it was first studied in the nineteenth century (Ayuso, 1988; Báguena, 2002; Trujillo, 2002) –, it was only as a result of experiences in the two World Wars that it began to establish a substantial presence in psychopathology manuals. From those great international conflicts up to more recent traumatic situations, PTSD has trod a long and painful road: child abuse, gender violence, fires, road accidents, natural disasters, terrorist attacks, and torture have been among the aspects most commonly studied by researchers.

From the point of view of official diagnostic classification, the disorder appears for the first time with the label «*great reaction to stress*» (DSM-I) (APA, 1952). Later, the introduction of PTSD as a formal diagnostic cate-

gory in the DSM-III (APA, 1980) stimulated renewed scientific and clinical interest in the condition (Giaconia, Reinherz, Silverman, Pakiz, Frost & Cohen, 1995; Kleber, Figley & Gersons, 1995). This third edition eliminated the theoretical and etiological explanations, substituting them with a more descriptive approach (Perry, Difede, Musngi, Frances & Jacobsberg, 1992); in an attempt to be atheoretical, it totally abandoned the psychodynamic perspective on psychiatric phenomena (Van der Kolk, Pelcovitz, Roth, Mandel, McFarlane & Herman, 1996). The DSM-III-R (APA, 1987) narrowed the criteria for the diagnosis of PTSD, adding also the condition that the symptoms be present for at least one month. In the DSM-IV (APA, 1994), the basic contribution was to include a measure of the individual's subjective response to trauma, of emotional anxiety and of perceived helplessness.

In recent years, a great deal of research work has associated traumatic situations with psychological impact and, specifically, with PTSD. The results of different studies indicate an indisputable relationship between the occurrence of a traumatic situation and the risk of suffering subsequent psychological problems, and this is par-

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ticularly evident in studies carried out with war veterans (Freedy & Hobfoll, 1995). López-Ibor (1942) examined the psychological impact of war among people who took part in the Spanish Civil War, observing the frequencies of psychogenic alterations (10% in the Republican zone and 5% in the Nationalist zone), whilst other research, in relation to the Vietnam War (Bremner, Scott, Delaney Southwick, Mason, Johnson, Innis, McCarthy & Carney, 1993), claim that over half the veterans of combat fulfilled the criteria for a PTSD diagnosis.

The study of war-related trauma has also served as a paradigm for research into other types of post-traumatic stress, such as that deriving from traumatic situations occurring in childhood. The results of different studies indicate that it is common to find PTSD symptoms among victims of both child physical abuse (Famularo, Fenton, Kinscherff, Ayoub & Barnum, 1994), and child sexual abuse (McLeer, Deblinger, Henry & Orvaschel, 1992).

Research on gender violence has contributed to the appearance of data on the frequency of PTSD in the general population, though it is difficult to make a precise estimation of the presence of this phenomenon in society, since many victims fail to report the assault or to seek attention at hospitals or women's centres (Corral, Echeburúa & Sarasúa, 1989). The results of studies in this area concur in affirming that the fact of suffering gender violence puts the victim at high risk of PTSD, even more so than for other traumatic situations (Arata, 1999; Herrero & Garrido, 2002; Neumann, Houskamp, Pollock & Briere, 1996).

The frequency of natural disasters all over the world has led to widespread study of this type of traumatic situation. Some authors (Nicolás, Artetxe, García, Jáuregui & Amayra, 1991) have observed post-traumatic symptoms after the disaster, both in victims and in professionals. After Hurricane Andrew, some researchers (Garrison, Bryant, Addy, Spurrier, Freedy & Kilpatrick, 1995) reported PTSD symptoms among the victims, as did others in the wake of the Marathwada earthquake in India (Sharan, Chandhary, Kavathekar & Saxena, 1996), or that which occurred in Armenia (Goenjian, Pynoos, Steinberg, Najarian, Asarnow, Karayan, Ghurabi & Fairbanks, 1995).

Road accidents also have great psychological impact on victims, with the differential characteristic that they are situations accompanied by a combination of psycho-

logical, medical and legal consequences (Brom, Cléber & Hofman, 1993). In this context, some researchers (Hickling & Blanchard, 1992) have noted that patients who suffer cerebral organic lesions do not present criteria for a PTSD diagnosis; this is quite probably related to total or partial memory loss associated with the accident.

Another type of traumatic situations that makes a profound psychological mark on victims is fire. Some researchers (Famularo et al., 1994) have indicated that a high percentage of victims (35.3%) presented symptoms for a PTSD diagnosis two months after the traumatic event, and that this figure increase to 40% at six months and to 45.2% at twelve months.

It should also be pointed out that a relevant aspect in the study of PTSD is its comorbidity with other disorders on Axis I of the DSM-IV (APA, 1994). This is notably the case for depression and for anxiety disorders; indeed, a diagnosis of PTSD alone in a person who has been the victim of a traumatic situation is fairly unusual (Breslau, Davis, Andreski & Peterson, 1991; Famularo et al., 1996; Giaconia et al., 1995; Goenjian et al., 1995; Hickling & Blanchard, 1992; McFarlane, 1991; Pitman, Altman & Macklin, 1989; Sharan et al., 1996).

Thus, the research mentioned above has contributed a range of findings on the relationship between experiencing a specific traumatic situation and the appearance of psychological symptoms associated with that event. On the other hand, there have been few studies in the Spanish context that offer results on the frequency with which people have been diagnosed with PTSD after being victims of a given traumatic situation. It would therefore seem relevant to contribute up-to-date findings on the psychological consequences for victims of different traumatic situations, with a view to analyzing which of them have the greatest impact. Our specific objectives are as follows: to determine the frequency with which people who have been victims of a traumatic situation in our context develop PTSD; to explore the presence of PTSD symptoms as a function of variables which would seem to be important in determining predisposition to undergoing certain types of traumatic situation, such as gender, age at the time of the trauma, and type of traumatic event; and to examine the incidence of other psychopathological diagnoses associated with PTSD.

METHOD

Participants

A total of 1507 students from the University of the Basque Country participated in the first phase of the study, of whom 35.4% (n= 533) were men and 64.6% (n= 974) women. Mean age of the participants was 21.08 years, with a standard deviation of 3.13 years. In the second phase we assessed 274 participants, of whom 28.1% (n= 77) were men and 71.9% (n= 197) women. Mean age in this second phase was 21.46 years, with a standard deviation of 3.67 years.

Instruments

Checklist of Stressful and Traumatic Events (Black, 1984). This assesses the presence of traumatic life situations through 50 items or traumatic situations. Respondents must indicate if they have been the victim of one or more of the situations described.

Trauma Assessment for Adults (TAA) Revised (Resnick, Best, Kilpatrick, Freedy, Falsetti & Dansky, 1997). This explores the presence of traumatic situations through four subscales: the first assesses the presence or absence of the traumatic situation proposed, the second inquires about the age at which the traumatic situation first occurred, the third refers to the age at which it occurred most recently, and the fourth asks whether the person thought he or she could have died or been seriously injured.

Structured Interview for PTSD (SIP) (Davidson, 1997). Structured interview with 17 items, each with five response alternatives (0-4), which explores the diagnostic criteria of the PTSD according to the DSM-IV (APA, 1994). The scale has a reliability index of 0.80 measured by the Cronbach's alpha coefficient, and a test-retest

reliability of 0.89 measured by the Pearson correlation coefficient.

Beck Depression Inventory (BDI) (Beck, Rush, Shaw & Emery, 1979). This inventory is made up 21 items with four response alternatives (0-3). It has the following cut-off points: <10 points: none or minimal depression; 11-17 points: mild depression, 18-29 points: moderate depression; 30-63 points: severe depression.

State-Trait Anxiety Inventory (STAI) (Spielberger, Gorsuch & Lushene, 1970). This questionnaire comprises separate scales that evaluate two independent concepts of anxiety: anxiety as state (S) and as trait (T). The alpha coefficients of internal consistency were obtained by means of the formula KR-20, modified by Cronbach, and the indices found lay between 0.83 and 0.92. Test-retest reliability on the Trait Anxiety scale was 0.73 in men and 0.77 in women, while reliability of the State Anxiety scale was 0.33 in men and 0.31 in women.

Procedure

Data collection took place in two phases. In the first phase we applied the *Checklist of Stressful and Traumatic Events* and the *TAA*, with the aim of gathering information about the traumatic situations experienced by participants. They were given a control code that identified them for the second phase. Only those who had been victims of traumatic situations classified as serious participated in the second phase. The selection criteria used were those proposed by the DSM-IV (APA, 1994) for defining a traumatic event in the diagnosis of PTSD. In this second phase we applied the *SIP*, the *BDI* and the *STAI*. It was made clear that all participation was voluntary, and that anonymity and data confidentiality were guaranteed.

Table 1
Frequency of PTSD diagnostic criteria in relation to gender

PTSD Criteria	Men			Women			Total		
	N	n	Freq.	N	n	Freq.	N	n	Freq.
Criterion B: Re-living traumatic event	77	31	40.3%	197	109	55.3%	274	140	51.1%
Criterion C: Avoidance of stimuli associated with the trauma	77	25	32.5%	197	073	37.1%	274	098	35.8%
Criterion D: Hyperarousal	77	27	35.1%	197	088	44.7%	274	115	42.0%
Criterion E: Presence of symptoms more than 1 month	77	21	27.3%	197	079	40.1%	274	100	36.5%
Criterion F: Unease (clinical, social, work or in other important areas for the participant)	77	18	23.4%	197	071	36.0%	274	089	2.5%
PTSD diagnosis	77	16	20.8%	197	063	32.0%	274	079	28.8%

N= Total number of participants assessed.
n= Number of participants who fulfilled the PTSD diagnostic criterion.

RESULTS

Diagnostic criteria of PTSD. Participants were assessed with the diagnostic criteria of PTSD and statistically significant differences were found, $\chi^2(1, N= 274)= 3.385$; $p= .043$, between participants' gender with respect to diagnostic criteria of PTSD. Frequencies of fulfilment of diagnostic criteria, by gender and total, can be seen in Table 1.

PTSD diagnosis in relation to type of trauma. We assessed PTSD with respect to the different traumatic situations suffered by participants, finding statistically significant differences between type of traumatic situation and the fact of fulfilling the PTSD diagnostic criteria, as it can be seen in Table 2. The analyses indicated that the traumatic situations in which there were significant differences were: rape, $\chi^2(1, N= 274)= 15.142$; $p= .001$; gender violence, $\chi^2(1, N= 274)= 27.889$; $p= .001$; having been terrorized by or afraid of a parent (or threatened by step-parent) with unpredictable reactions because of alcohol or drug abuse, $\chi^2(1, N= 274)= 11.367$; $p= .002$; threats in order to obtain sexual con-

tact, $\chi^2(1, N= 274)= 7.357$; $p= .008$; physical aggression after age 18, $\chi^2(1, N= 274)= 6.514$; $p= .012$; perceived near-drowning or serious injury in floods, $\chi^2(1, N= 274)= 7.487$; $p= .023$; physical abuse as a child, $\chi^2(1, N= 274)= 4.914$; $p= .036$; and sexual abuse as a child, $\chi^2(1, N= 274)= 4.162$; $p= .047$.

Diagnostic criteria of PTSD in relation to age at which the trauma occurred. We assessed age at which the trauma occurred in relation to fulfilment of the PTSD diagnostic criteria, finding statistically significant differences, $\chi^2(1, N= 274)= 15.825$; $p= .001$, between ages of occurrence of the trauma with respect to PTSD diagnosis; it was in the 12-15 years age group where the highest percentages of fulfilment of the PTSD diagnostic criteria were found.

PTSD and scores in depression and anxiety symptoms. We also found statistically significant differences between participants diagnosed with PTSD and those not thus diagnosed with respect to the scores obtained in depression and anxiety symptoms. Those diagnosed with PTSD obtained higher scores in depressive symptomatology than those who were not diagnosed with PTSD, $t(122.174)= -7.028$; $p= .001$. Likewise, those diagnosed with PTSD obtained higher scores in (state) anxiety symptomatology, $t(272)= -7.531$; $p= .001$ and (trait) anxiety symptomatology, $t(178.792)= -6.430$; $p= .001$, than those who were not diagnosed with PTSD, as can be seen in Table 3.

DISCUSSION

The results obtained in the present study support the hypothesis that the fact of experiencing a traumatic situation constitutes a substantial risk factor in relation to the development of post-traumatic symptoms. Our findings also indicate the relevance of some variables as predictors of a person being diagnosed with PTSD after going through a traumatic event. In this regard, exploration of the gender variable in the diagnosis of PTSD shows the greater vulnerability of women to meeting the diagnostic criteria after being the victim of a traumatic situation (Green, 1994; Norris, 1992).

The results also suggest that having been the victim of specific traumatic situations, such as rape, gender violence or child sexual abuse puts the victim in a situation of risk for meeting the criteria of PTSD diagnosis (Corral et al., 1992; McLeer et al., 1992). This is parti-

Table 2
PTSD diagnosis in relation to type of trauma

Traumatic situation	N	n	Frec.
Rape	6	6	100%
Perceived near-drowning or serious injury in floods	1	1	100%
Having been terrorized by or afraid of a parent (or threatened by step-parent) with unpredictable reactions because of alcohol or drug abuse	6	5	83.3%
Gender violence with threats	16	10	62.5%
Child physical abuse	5	3	60.0%
Threats in order to obtain sexual contact	18	8	44.4%
Physical aggression after age 18	11	4	36.4%
Child sexual abuse	9	3	33.3%

N= Total number of participants assessed.
n= Number of participants who fulfilled the PTSD diagnostic criterion.

Table 3
PTSD diagnosis and scores in depression and anxiety symptoms

	BDI		STAI-S		STAI-T	
	Mean	SD	Mean	SD	Mean	SD
No PTSD	5.72	4.87	16.89	10.20	16.80	8.85
PTSD	12.50	5.96	29.38	8.73	26.75	8.10

cularly evident in the case of rape victims, since all of them were diagnosed with PTSD. Also of note is the relationship between having suffered gender violence, having been afraid of a parent prone to violent reactions due to alcohol or drugs, or having received threats for obtaining sexual contact and subsequent diagnosis of PTSD. The results also show that, in addition to the situations mentioned above, having been the victim of child physical abuse is a traumatic situation that may quite frequently lead to suffering PTSD (Famularo et al., 1994). Furthermore, it was found in the study of natural disasters that, albeit less commonly, they were also an important cause of PTSD diagnosis. Among these, floods are a type of disaster that generates high level of PTSD (Nicolás et al., 1991).

As regards age at which the trauma occurred, analysis of this showed it to be a differentiating aspect on considering risk factors for exposure to a traumatic situation and, consequently, for the diagnosis of PTSD; thus, combining the variables mentioned above, it can be predicted that women who are victims of particular traumatic situations, and if those situations occur in a given age range, end up in a situation of risk for being diagnosed with PTSD.

Furthermore, the finding that those who diagnosed with PTSD obtained higher scores in depressive and anxiety symptoms than those who were not is also in line with previous research in the field (Breslau, Davis, Andreski & Peterson, 1991; Famularo et al., 1996; Giaconia et al., 1995; Goenjian et al., 1995; Hickling & Blanchard, 1992; McFarlane, 1991; Pitman, Altman & Macklin, 1989; Sharan et al., 1996). Bearing in mind these findings, it can also be predicted that people who have been diagnosed with PTSD will have a greater probability of suffering from depression and anxiety than those who have not.

There are few studies in the Spanish context offering up-to-date epidemiological data on PTSD. Therefore, the present work has the objective of comparing, delimiting and analyzing frequencies of diagnosis of PTSD and its associated characteristics in a large sample of university students from the Basque Country.

It should be pointed out that this study has a series of limitations: the first of these refers to the use of a non-random sample of university students from the Basque Country, so that the results cannot be generalized to the

population as a whole. The second limitation is related to the data collection: the source of information was participants themselves, and this may lead to different types of error and inaccuracy.

It is necessary to advance in this area of research through the use of longitudinal studies that would permit us to explore the course of symptomatology over time. We would thus be able to distinguish between recent victims and long-term victims, and to determine the differences in the psychological effects of trauma depending on when the traumatic situation occurred.

Moreover, it would be important to study in more depth the risk factors – biological, psychological and social – for being a victim of a given traumatic situation, as well as to identify the factors that protect people from developing post-traumatic symptoms after exposure to a specific traumatic situation. This aspect should be explored with a view to providing preventive indications.

Finally, it would also be relevant to examine the potential for assessment instruments adapted to different types of traumatic situation, and to provide data that could contribute to the design of instruments that were more sensitive to the most commonly occurring traumatic situations. This would permit more effective discrimination and fine tuning of the different post-traumatic symptoms.

REFERENCES

- Arata, C.M. (1999). Repeated sexual victimization and mental disorders in women. *Journal of Child Sexual Abuse*, 7(3), 1-17.
- Ayuso, J.L. (1988). *Trastornos de angustia*. Barcelona: Martínez Roca.
- Báguena, M.J. (2002). Tratamientos psicológicos eficaces para el estrés post-traumático. *Psicothema*, 13(3), 479-492.
- Bremner, J.D., Scott, T.M., Delaney, R.C., Southwick, S.M., Mason, J.W., Johnson, D.R., Innis, R.B., McCarthy, G. & Carney, D.S. (1993). Deficits in short-term memory in posttraumatic stress disorder. *American Journal of Psychiatry*, 150(7), 1.015-1.019.
- Breslau, N., Davis, G.C., Andreski, P. & Peterson, E. (1991). Traumatic events and Posttraumatic Stress Disorder in a urban population of young adults. *Arch. Gen. Psychiatry*, 48(2), 16-222.
- Brom, D., Kleber, R.J. & Hofman, M.C. (1993). Victims

- of traffic accidents: Incidence and prevention of post-traumatic stress disorder. *Journal of Clinical Psychology*, 49(2), 131-139.
- Corral, P., Echeburúa, E. & Sarasúa, B. (1989). Estrés postraumático en víctimas de violación. In E. Echeburúa (Ed.), *Estrés: Problemática psicológica y vías de intervención* (pp. 121-136). San Sebastián: Universidad del País Vasco.
- Corral, P., Echeburúa, E., Sarasúa, B. & Zubizarreta, I. (1992). Estrés postraumático en excombatientes y en víctimas de agresiones sexuales: Nuevas perspectivas terapéuticas. *Boletín de Psicología*, 35, 7-24.
- Famularo, R., Fenton, T., Kinscherff, R., Ayoub, C. & Barnum, R. (1994). Maternal and child posttraumatic stress disorder in cases of child maltreatment. *Child Abuse & Neglect*, 18, 27-36.
- Famularo, R., Fenton, T., Kinscherff, R. & Augustyn, M. (1996). Psychiatric comorbidity in childhood posttraumatic disorder. *Child Abuse & Neglect*, 20(10), 953-961.
- Freedy, J.R. & Hobfoll, S.E. (Eds.) (1995). *Traumatic stress: From theory to practice*. New York: Plenum Press.
- Garrison, C.Z., Bryant, E.S., Addy, C.L., Spurrier, P.G., Freedy, J.R. & Kilpatrick, D.G. (1995). Posttraumatic stress disorder in adolescents after Hurricane Andrew. *Journal of the American Academy of Child & Adolescent Psychiatry*, 34(9), 1.193-1.201.
- Giaconia, R.M., Reinherz, H.Z., Silverman, B., Pakiz, B., Frost, A.K. & Cohen, E. (1995). Traumas and Posttraumatic Stress Disorder in a community of older adolescents. *Journal of the American Academy of Child & Adolescent Psychiatry*, 34, 1.369-1.380.
- Goenjian, A.K., Pynoos, R.S., Steinberg, A.M., Najarian, L.M., Asarnow, J.R., Karayan, I., Ghurabi, M. & Fairbanks, L. A. (1995). Psychiatric comorbidity in children after the 1988 earthquake in Armenia. *Journal of the American Academy of Child & Adolescent Psychiatry*, 34(9), 1.174-1.184.
- Green, B.L. (1994). Psychosocial research in traumatic stress: An update. *Journal of Traumatic Stress*, 7(3), 341-362.
- Herrero, C. & Garrido, E. (2002). Los efectos de la violencia sobre sus víctimas. *Psicothema*, 14, supl., 109-117.
- Hickling, E.J. & Blanchard, E.B. (1992). Post-Traumatic Stress Disorder and motor vehicle accidents. *Journal of Anxiety Disorders*, 6, 285-291.
- Kleber, R.J., Figley, C.R. & Gersons, B.P. R. (Eds.) (1995). *Beyond trauma. Cultural and societal dynamics*. New York: Plenum Press.
- López-Ibor, J.J. (1942). *Neurosis de guerra*. Barcelona: Editorial Científico-Médica.
- McFarlane, A.C. (1991). Post-traumatic stress disorder. *International Review of Psychiatry*, 3, 203-213.
- McLeer, S.V., Deblinger, E., Henry, D. & Orvaschel, H. (1992). Sexually abused children at high risk for Post-Traumatic Stress Disorder. *Journal of the American Academy of Child & Adolescent Psychiatry*, 31(5), 875-879.
- Neumann, D.A., Houskamp, B.M., Pollock, V.E. & Briere, J. (1996). The long-term sequelae of childhood sexual abuse in women: a meta-analytic review. *Child maltreatment*, 1(1), 6-16.
- Nicolás, L. De, Artetxe, A.I., García, F., Jáuregui, M.A. & Amayra, I. (1991). Evaluación psicosocial de los efectos de un desastre natural: Estudio piloto. In R. De Castro. *Psicología ambiental: Intervención y evaluación del entorno* (pp. 331-339). Sevilla: Arquetipo Ediciones.
- Norris, F.H. (1992). Epidemiology of trauma: Frequency and impact of different potentially traumatic events on different demographic groups. *Journal of Consulting & Clinical Psychology*, 60, 409-418.
- Perry, S., Difede, J., Musngi, G., Frances, A.J. & Jacobsberg, L. (1992). Predictors of posttraumatic stress disorder after burn injury. *American Journal of Psychiatry*, 149(7), 931-935.
- Pitman, R.K., Altman, B. & Macklin, M.L. (1989). Prevalence of posttraumatic stress disorder in wounded Vietnam veterans. *American Journal of Psychiatry*, 146(5), 667-669.
- Sharan, P., Chandhary, G., Kavathekar, S.A. & Saxena, S. (1996). Preliminary report of psychiatric disorders in survivors of a severe earthquake. *American Journal of Psychiatry*, 153(4), 556-558.
- Trujillo, M (2002). *Psicología para después de una crisis*. Madrid: Aguilar.
- Van der Kolk, B.A., Pelcovitz, D., Roth, S., Mandel, F.S., McFarlane, A. & Herman, J.L. (1996). Dissociation, somatization and affect dysregulation: The complexity of adaptation to trauma. *American Journal of Psychiatry*, 153(7), 83-93.