
Epidemiology of PTSD

From the National Center for Post-Traumatic Stress Disorder, Department of Veterans Affairs

WWW.PTSD.VA.gov

Jaimie L. Gradus, DSc, MPH

Epidemiology of PTSD

Epidemiology is the study of the distribution and determinants of disease in a population. Numerous studies have been conducted to assess the prevalence of PTSD across different populations. Below is a brief review of some of the major studies that have assessed the prevalence of PTSD in nationally representative samples as well as in samples of Veterans.

What is prevalence?

Prevalence is the proportion of people in a population that have a given disorder at a given time. It represents the existing cases of a disorder in a population or group. Prevalence estimates can be influenced by many factors including disorder occurrence (if new disorder occurrences increase, prevalence will increase) and the duration of the disorder (the longer people live with a disorder, the higher the prevalence). These estimates can also differ by demographic factors such as age and gender. It is important to qualify prevalence estimates with the time at which they were measured, as prevalence estimates can shift over time. Similarly, when interpreting prevalence estimates, it is important to keep in mind that prevalence is dynamic - it can change over people, places, and time.

Often prevalence is discussed in terms of lifetime prevalence. Other times, statistics will be given on current prevalence of PTSD in a given time frame, usually one year. At the end of this fact sheet you will find descriptions of other terms commonly used in epidemiology.

Prevalence of PTSD

U.S. National Comorbidity Survey Replication

The National Comorbidity Survey Replication (NCS-R), conducted between February 2001 and April 2003, comprised interviews of a nationally representative sample of 9,282 Americans aged 18 years and older. PTSD was assessed among 5,692 participants, using DSM-IV criteria. The NCS-R estimated the lifetime prevalence of PTSD among adult Americans to be 6.8% (1). Current past year PTSD prevalence was estimated at 3.5% (2). The lifetime prevalence of PTSD among men was 3.6% and among women was 9.7%. The twelve month prevalence was 1.8% among men and 5.2% among women (3).

Epidemiology of PTSD (continued)

These findings are very similar to those of the first National Comorbidity Survey. The original survey was conducted in the early 1990's and comprised interviews of a representative national sample of 8,098 Americans aged 15 to 54 years. In this earlier sample, the estimated prevalence of lifetime PTSD was 7.8% in the general population. Women (10.4%) were more than twice as likely as men (5%) to have PTSD at some point in their lives (4).

PTSD among children and adolescents

To date, no population-based epidemiological study has examined the prevalence of PTSD among children. However, studies have examined the prevalence of PTSD among high-risk children who have experienced specific traumatic events, such as abuse or natural disasters. Prevalence estimates from studies of this type vary greatly; however, research indicates that children exposed to traumatic events may have a higher prevalence of PTSD than adults in the general population (5).

Kilpatrick and colleagues (2003) assessed the prevalence of PTSD among adolescents based on data from the National Survey of Adolescents, which included a household probability sample of 4,023 adolescents between the ages of 12 and 17. Using DSM-IV criteria for PTSD, the six-month prevalence was estimated to be 3.7% for boys and 6.3% for girls (6).

PTSD in other countries

In the late 1990s the World Health Organization (WHO) began collecting epidemiological information on mental health disorders around the world. As of 2008, the research consortium had collected data from nearly 200,000 respondents in 27 countries (7). Published estimates are available of PTSD lifetime prevalence in most of the first 17 countries to complete the World Mental Health Surveys. In general, the estimates for lifetime PTSD prevalence range from a low of 0.3% in China to 6.1% in New Zealand. However, statistics reported from various countries are not directly comparable due to methodological differences in survey administration and sampling strategies.

National Vietnam Veterans Readjustment Study

The National Vietnam Veterans Readjustment Study (NVVRS) , conducted between November 1986 and February 1988, comprised interviews of 3,016 American Veterans selected to provide a representative sample of those who served in the armed forces during the Vietnam era. The estimated lifetime prevalence of PTSD among these Veterans was 30.9% for men and 26.9% for women. Of Vietnam theater Veterans, 15.2% of males and 8.1% of females were currently diagnosed with PTSD at the time the study was conducted (8).

Gulf War Veterans

Kang and others conducted a study to estimate the prevalence of PTSD in a population-based sample of 11,441 Gulf War Veterans from 1995 to 1997. PTSD was assessed using the PTSD Checklist (PCL;9) rather than interviews, with those scoring 50 or higher considered to have met criteria for PTSD. The prevalence of current PTSD in this sample of Gulf War Veterans was 12.1%. Further, the authors estimated the prevalence of PTSD among the total Gulf War Veteran population to be 10.1% (10).

Operation Enduring Freedom/Operation Iraqi Freedom

In 2008, the RAND Corporation, Center for Military Health Policy Research, published a population-based study that examined the prevalence of PTSD among previously deployed Operation Enduring Freedom and Operation Iraqi Freedom (Afghanistan and Iraq) service members (11). PTSD was assessed using the PCL, as in the Gulf War Veterans study. Among the 1,938 participants, the prevalence of current PTSD was 13.8%.

Epidemiology of PTSD (continued)

Commonly-used Epidemiologic Terms (12)

What is cumulative incidence?

Cumulative incidence (sometimes called "risk") is the proportion of people that develop a disorder over time among only the population at risk for that disorder. It represents the occurrence of new cases of a disorder in a population or group.

Like prevalence, it is important to qualify cumulative incidence estimates with the length of time over which they are measured (e.g. over 5 years). This is because a large cumulative incidence (or a large amount of new disorder occurrence) occurring over a short period of time has different intervention implications than a large cumulative incidence occurring over a very long period of time.

What is a cumulative incidence ratio?

A cumulative incidence ratio (sometimes called a risk ratio or a relative risk) is a relative measure of the cumulative incidence of disorder in a group exposed to a certain factor compared to the cumulative incidence of a disorder in a group that is unexposed to that factor.

What is the incidence rate?

An incidence rate is the proportion of people who develop a disorder over a period of time among the population at risk for that disorder. It represents the rate at which new cases of a disorder are occurring in a population or group. Incidence rates are expressed as the number of new cases of a disorder per person-time.

What is an incidence rate ratio?

A rate ratio (sometimes called relative risk), is a relative measure of incidence rate of disorder in a group exposed to a certain factor compared to the incidence rate of a disorder in a group that is unexposed to that factor.

What is an odds ratio?

An odds ratio (sometimes called a relative risk) is a relative measure of the odds of a disorder in a group exposed to a certain factor compared to the odds of a disorder in a group unexposed to that factor.

References

1. Kessler, R.C., Berglund, P., Delmer, O., Jin, R., Merikangas, K.R., & Walters, E.E. (2005). Lifetime prevalence and age-of-onset distributions of DSM-IV disorders in the National Comorbidity Survey Replication. *Archives of General Psychiatry*, 62(6): 593-602.
2. Kessler, R.C., Chiu, W.T., Demler, O., Merikangas, K.R., & Walters, E.E. (2005). Prevalence, severity, and comorbidity of 12-month DSM-IV disorders in the National Comorbidity Survey Replication. *Archives of General Psychiatry*, 62(6): 617-627.
3. National Comorbidity Survey. (2005). NCS-R appendix tables: Table 1. Lifetime prevalence of DSM-IV/WMH-CIDI disorders by sex and cohort. Table 2. Twelve-month prevalence of DSM-IV/WMH-CIDI disorders by sex and cohort. Accessed at: <http://www.hcp.med.harvard.edu/ncs/publications.php>
4. Kessler, R.C., Sonnega, A., Bromet, E. Hughes, M., & Nelson, C.B. (1995). Posttraumatic stress disorder in the National Comorbidity Survey. *Archives of General Psychiatry*, 52(12), 1048-1060.

Epidemiology of PTSD (continued)

5. Gabbay, V., Oatis, M.D., Silva, R.R., & Hirsch, G. (2004). Epidemiological aspects of PTSD in children and adolescents. In Raul R. Silva (Ed.), *Posttraumatic Stress Disorder in Children and Adolescents: Handbook* (1-17). New York: Norton.
6. Kilpatrick, D.G., Ruggiero, K.J., Acierno, R., Saunders, B.E., Resnick, H.S., & Best, C.L. (2003). Violence and risk of PTSD, major depression, substance abuse/dependence, and comorbidity: results from the National Survey of Adolescents. *Journal of Consulting and Clinical Psychology, 71*(4), 692-700.
7. Kessler, R.C., & Üstün, T. B. (Eds.). (2008). *The WHO World Mental Health Surveys: global perspectives on the epidemiology of mental disorders*. New York: Cambridge University Press, 1-580.
8. Kulka, R.A., Schlenger, W.A., Fairbanks, J.A., Hough, R.L., Jordan, B.K., Marmar, C.R.,... Cranston, A.S. (1990). *Trauma and the Vietnam War generation: Report of findings from the National Vietnam Veterans Readjustment Study*. New York: Brunner/Mazel.
9. Weathers, F., Litz, B., Herman, D., Huska, J., & Keane, T. (October 1993). The PTSD Checklist (PCL): Reliability, Validity, and Diagnostic Utility. Paper presented at the Annual Convention of the International Society for Traumatic Stress Studies, San Antonio, TX.
10. Kang, H.K., Natelson, B.H., Mahan, C.M., Lee, K.Y., & Murphy, F.M. (2003). Post-Traumatic Stress Disorder and Chronic Fatigue Syndrome-like illness among Gulf War Veterans: A population-based survey of 30,000 Veterans. *American Journal of Epidemiology, 157*(2):141-148.
11. Tanielian, T. & Jaycox, L. (Eds.). (2008). *Invisible Wounds of War: Psychological and Cognitive Injuries, Their Consequences, and Services to Assist Recovery*. Santa Monica, CA: RAND Corporation.
12. Rothman, K.J. (2002). *Epidemiology: An introduction*. Oxford: Oxford

The information on this Web site is presented for educational purposes only. It is not a substitute for informed medical advice or training. Do not use this information to diagnose or treat a mental health problem without consulting a qualified health or mental health care provider.

All information contained on these pages is in the public domain unless explicit notice is given to the contrary, and may be copied and distributed without restriction.

For more information call the PTSD Information Line at (802) 296-6300 or send email to ncptsd@ncptsd.org. This page was last updated on Mon Sep 18 14:48:11 2000.

The Center for Integrated Healthcare gratefully
acknowledges the National Center for Post-Traumatic
Stress Disorders for authorship of information contained
within this brochure.