Full and Partial Posttraumatic Stress Disorder: Findings From a Community Survey

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Objective: Full and partial posttraumatic stress disorder (PTSD) following trauma exposure were examined in a community sample in order to determine their prevalence and their relative importance and functional significance. Method: A standardized telephone interview with a series of trauma probes and a DSM-IV PTSD checklist was administered to a random sample of 1,002 persons in a midsized Midwestern Canadian city. The authors determined current (i.e., 1-month) prevalence rates of full PTSD, i.e., all DSM-IV criteria, and partial PTSD, i.e., fewer than the required number of DSM-IV criterion C symptoms (avoidance/numbing) or criterion D symptoms (increased arousal). Additional questions about interference with functioning were also posed. Results: The estimated prevalence of full PTSD was 2.7% for women and 1.2% for men. The prevalence of partial PTSD was 3.4% for women and 0.3% for men. Interference with work or school was significantly more pronounced in persons with full PTSD than in those with only partial symptoms, although the latter were significantly more occupationally impaired than traumatized persons without PTSD. Conclusions: These findings in an epidemiologic sample underscore observations from patient and military groups that many traumatized persons suffer from a subsyndromal form of PTSD. These persons with partial PTSD, although somewhat less impaired than persons with the full syndrome, nonetheless exhibit clinically meaningful levels of functional impairment in association with their symptoms. This subthreshold form of PTSD may be especially prevalent in women. Additional study of partial PTSD is warranted.

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P osttraumatic stress disorder (PTSD) was first codified in DSM-III to describe the range of syndromal responses to extreme stressors. In the 17 years since the publication of DSM-III and its evolution through DSM-III-R into DSM-IV, numerous studies have shown that PTSD frequently appears after exposure to a variety of traumata, such as combat, criminal victimization, sexual assault, natural disasters, and motor vehicle accidents (1–10). Moreover, we have come to appreciate that traumata of this nature are not rare and, accordingly, that rates of PTSD in non-

clinical samples and in the general population are much higher than we would have expected a mere decade ago (11–16). The net effect of this series of findings has been to enhance professional and public awareness of the pervasiveness of PTSD.

Among the unresolved questions in the diagnosis and classification of PTSD is the taxonomic status and clinical importance of subsyndromal or subthreshold variants (17–19). In Vietnam veterans it has been noted that subthreshold presentations are particularly common and that persons with this so-called "partial PTSD" exhibit levels of impairment that rival those of persons with full PTSD (2, 20, 21). Partial PTSD has also been noted to be highly prevalent in sexual abuse survivors and other traumatized persons (22–24). While it has been recognized that subthreshold presentations of other disorders, such as depression (25) and social phobia (26), are not only prevalent but also frequently disabling, to the best of our knowledge these issues have not yet been examined with respect to PTSD in an epidemiologic sample.

The goal of the present study was to administer a series of trauma probes to a community sample of men

and women, to determine the rates of full and partial PTSD, and to examine in a preliminary fashion the extent to which these two presentations of post-traumatic stress are associated with functional impairment or disability.

METHOD

Subject Sample

This survey was conducted in Winnipeg, Man., Canada, in the spring of 1994. Winnipeg is a city of approximately 650,000 inhabitants with a stable economy and population base, located in the Canadian Midwest. The goal of the study was to interview approximately 1,000 respondents over 1 month. The survey employed a two-stage sampling frame to obtain 1) a probability sample of households in Winnipeg based on random-digit dialing and 2) a random predesignation of a male or female respondent within each household to ensure an equal representation of male and female participants. Past experience in our studies indicates that women are more likely than men to answer the telephone. If the person answering was of the specified gender, only that person could be interviewed. If the person was not of the specified gender, that person was asked if someone of the appropriate gender was in the household. If there was no one of the specified gender living there, the respondent could only be the person who answered the telephone. If a person of the designated gender was living there, the interviewer was to ask for this person or the oldest if there was more than one. If the eligible respondent was not at home or for some other reason was not available, every effort was made to set up another interview appointment. No substitution was permitted if the eligible respondent refused. In addition, the respondent had to be 18 years of age or older and the dwelling unit had to be the respondent's usual place of residence.

Each interviewer was to complete up to 10 attempts to call a household, varying time and date of call (modal number of callbacks was two). All interviews were conducted over the telephone, with the respondent either at his or her residence or, occasionally, at another telephone number (location) convenient for the respondent. The response rate for the survey was 72% of eligible households in Winnipeg. The median interview length was 30 minutes (range=13–118). All respondents gave their informed, oral consent to participate in this study after an explanation of the study's nature, goals, risks, and benefits was provided. The study was approved by the Human Subjects Committee, Faculty of Medicine, University of Manitoba.

Interviewer Selection

Because of the nature of this survey, which included potentially sensitive questions about sexual trauma experiences, we exclusively used female interviewers for this survey. All interview personnel were professional interviewers who had extensive experience with population surveys. After a pilot test, 10 professional interviewers spent 9 hours practicing for this project with the help of an instruction handbook written specifically for this version of the survey.

Questionnaire Design

The questionnaire in its entirety is available from the authors but is summarized here. After an introduction describing the nature of the survey, a series of questions about sociodemographic status were

TABLE 1. Lifetime Prevalence of Trauma Exposure Among Women and Men in a Community Sample[a]

Type of Traumatic Event	Women (N=524)		Men (N=478)		Women Versus Men	
	N	%	N	%	Odds Ratio	95% Confidence Interval
More common in women						
Rape	81	15.5	8	1.7	10.43	5.71–19.05
Sexual molestation before age 18	100	19.2	22	4.7	4.84	3.11–7.53
More common in men						
Combat	4	0.7	32	6.7	0.10	0.04–0.23
Witnessing severe injury or death	98	18.8	186	38.9	0.36	0.27–0.48
Being threatened with weapon	65	12.4	94	19.7	0.58	0.41–0.81
Serious motor vehicle accident	102	19.5	137	28.6	0.60	0.45–0.81
Equally common in men and women						
Robbery or holdup	56	10.7	61	12.8	0.82	0.56–1.20
Physical attack	110	21.0	118	24.6	0.81	0.61–1.09
Violent death of friend or family member	182	34.7	160	33.5	1.06	0.81–1.37
Fire	46	8.7	39	8.1	1.08	0.69–1.69
Natural disaster	67	12.8	66	13.8	0.91	0.63–1.32
Other	87	16.7	91	19.0	0.86	0.62–1.18

[a]Sample distributions reflect the weighted (for gender) number of respondents rounded to the nearest whole number. Data on some variables were not available for all respondents.

posed. PTSD was assessed with a reliable instrument, the Modified PTSD Symptom Scale (27), which we modified for DSM-IV and administered by interview. Twelve separate questions were asked to probe for the lifetime occurrence of traumata (one for each of 12 types of trauma). Eleven questions focused on specific types of trauma (see table 1), and the 12th question asked about "any other terrible experience that most people never go through"; answers to the last question were reviewed individually by one of the investigators (M.B.S.). Each of the 12 trauma probes was followed by additional probes about 1) whether the event had occurred in the past year, 2) whether the respondent had thought she or he might be killed or seriously injured, 3) whether the respondent *was* physically injured, and 4) whether the respondent had witnessed someone else being physically injured or killed.

If an individual gave an affirmative response to at least one of the 12 trauma probes, then she or he was asked to choose the "event which troubles you the most." As has been found to be the case for previous community epidemiologic surveys of PTSD (12–16), many individuals had experienced multiple traumatic events during their lifetimes. Thus, our study design, like that of the National Comorbidity Survey (16), forced the individual to focus on only one potentially qualifying event. However, there is a subtle difference between our survey and the National Comorbidity Survey in the way individuals were asked to choose among traumatic events. In the National Comorbidity Survey—which had the goal of determining *lifetime* rates of PTSD—the respondent was asked to nominate the single "most upsetting" event; presumably, this would be interpreted by individuals as the event that upset them the most *at the time it occurred.* In our survey—which had the goal of determining *current* (i.e., in the past 1 month) rates of PTSD—the respondent was asked about the event that currently "troubles you the most"; presumably, this would be the event most likely to be associated with current PTSD.

Our decision to focus solely on current PTSD prevalence (past month) makes it difficult to compare our results to those of surveys that focused on lifetime prevalence (11–16). Although we are not aware of any data on the comparative reliability of assessing PTSD on a "current" versus a "lifetime" basis, it would be surprising if the former was not intrinsically more reliable. Given our limited budgetary resources—and our inability to carry out a formal reliability study given these limitations—we decided to limit our inquiry to this narrower time frame.

A major difference between the National Comorbidity Survey and our current survey is that interviewers in the former did not complete the PTSD section (and other diagnostic sections) if the respondent

TABLE 2. Demographic Characteristics of 1,002 Persons in a Community Survey of Full and Partial PTSD[a]

Characteristic	N	%
Gender		
Female	524	52.3
Male	478	47.7
Age (years)		
18–29	310	31.0
30–39	254	25.4
40–49	168	16.8
50–64	135	13.5
≥65	134	13.4
Education (years)		
0–11	224	22.4
12	247	24.7
13–15	471	47.1
≥16	57	5.7
Employment status		
Full-time	405	40.4
Part-time	215	21.5
Retired	178	17.7
Unemployed	95	9.5
Other[b]	110	11.0
Income (dollars/year)		
0–19,999	343	34.2
20,000–39,999	254	25.3
40,000–69,999	118	11.7
≥70,000	24	2.4
Refused to answer	263	26.3

[a]All data are weighted for gender, and number of persons is rounded to the nearest whole number. Data on some variables were not available for all respondents.
[b]Includes homemakers and full-time students.

failed to meet criteria at various critical junctures in the interview. Given that the goal of the National Comorbidity Survey was to assess multiple psychiatric disorders, this shortcut was necessary for completion of interviews in a manageable time period. Because we were focused exclusively on PTSD, we administered the PTSD diagnostic module in its entirety. Thus, we were able to achieve our goal of assessing the current prevalence not only of *full* PTSD but also of subsyndromal cases (i.e., *partial* PTSD).

A third difference between the National Comorbidity Survey PTSD assessment and ours is that our diagnostic assessment conformed to DSM-IV. For the purposes of this study, what we term "full PTSD" refers to PTSD as defined by DSM-IV, including the criteria regarding duration (criterion E) and impairment and/or distress (criterion F). Partial PTSD has been defined in various ways in the literature (20–24), although the general notion has been to identify "subsyndromal" cases of PTSD. For this study we defined partial PTSD in a conservative, restrictive fashion: we included persons who met the DSM-IV PTSD criteria except that they lacked one or two of the necessary three criterion C symptoms and/or they lacked one of the necessary two criterion D symptoms. Persons were required to have at least one symptom in each category to qualify as having partial PTSD.

The PTSD symptom questions were phrased as, for example, "In the past month, have you had recurrent or intrusive distressing thoughts or recollections about the event?" The response categories were "not at all," "a little bit," "somewhat," or "very much"; only the latter two answers were considered positive responses. Following the PTSD diagnostic module were a series of questions about interference with occupational/educational and family/social functioning that the respondent felt was attributable to his or her posttraumatic symptoms. The response categories were the same as those for PTSD symptoms, and again, only "somewhat" and "very much" were considered to be positive responses. Finally, the respondent was asked about whether she or he had gone to see a "doctor, counselor, or member of the clergy for help in dealing with this event."

Statistical Analysis

The data were weighted to adjust for the gender difference between our sample (59.5% female) and the known gender distribution of Winnipeg according to the most recent census (52.3%). Most of the results reported here are presented in the form of prevalences or odds ratios with 95% confidence intervals; 95% confidence intervals that exclude 1.00 are considered statistically significant. Chi-square tests for 2×2 tables used Yates's correction. Levels of interference with education/occupational functioning and with social/family functioning in different diagnostic groups were compared by using analyses of variance; between-groups comparisons were made by using the Ryan-Einot-Gabriel-Welsch F test (28) to control for multiple comparisons. Analyses were conducted by means of the Statistical Analysis System, version 6.10 (29).

RESULTS

Demographic characteristics of the sample are presented in table 2.

Lifetime Prevalence of Trauma Exposure

Estimates of lifetime prevalence of trauma exposure are presented in table 1 separately for women and men; 74.2% of the women (N=389) and 81.3% of the men (N=389) reported at least one traumatic event (odds ratio=0.66, 95% confidence interval=0.49–0.89). As has been found in prior studies (12–16), many individuals had experienced two or more traumatic events; the prevalence rates of multiple traumatic events were 45.8% for the women (N=240) and 55.4% for the men (N=265) (continuity adjusted χ^2=8.86, df=1, p<0.003).

The two most common kinds of traumatic experiences (table 1) were the violent death of a friend or family member and being physically attacked; neither of these differed significantly in prevalence between men and women. Some experiences were significantly more common for either women (rape and sexual molestation) or men (combat, witnessing someone being severely injured or dying, being threatened with a weapon, being involved in a severe motor vehicle accident), a finding that is generally consistent with results of previous epidemiologic surveys (12–16).

Chronology of Trauma Exposure

The chronological proximity of the traumatic experiences designated for PTSD assessment is shown in table 3. Of interest, approximately one in five persons designated events that had occurred very recently (in the prior 12 months), whereas two in five persons designated events that had occurred more than 10 years in the past. There were no significant differences between women and men in the recency of exposure to the designated trauma.

1-Month Prevalence of DSM-IV PTSD and PTSD Symptoms

Estimates of the prevalences of PTSD and PTSD symptoms occurring in the preceding 1 month are presented in

table 4. The data are presented in several ways. First shown are the rates of women and men who met the full or partial *syndromal* criteria for PTSD (posttraumatic stress syndrome); these persons met the respective PTSD criteria with the exception that they may or may not have met the DSM-IV impairment/distress criterion (criterion E). Next shown are the rates of persons who met the full or partial DSM-IV criteria for PTSD, including criterion E. Finally, the combined rates for full *or* partial PTSD (both meeting the impairment/distress criterion) are shown.

Persons with current full or partial PTSD were more likely to be female (82.1%, 32 of 39) than were persons without full or partial PTSD (51.1%, 492 of 963) (continuity adjusted $\chi^2=12.8$, df= 1, p<0.001).

To summarize these data, what we see is that a significantly higher proportion of women than men exhibit current PTSD symptoms; partial PTSD (i.e., lacking some symptoms but still exhibiting evidence of clinically significant impairment and/or distress) is as prevalent as full PTSD in the community; and a significantly higher proportion of women than men suffer from partial PTSD.

Impaired Functioning in Full Versus Partial PTSD

To answer the question, "Do persons with the full symptomatic expression of PTSD suffer from more functional disability than persons with partial symptoms?" we compared the levels of interference with functioning reported by persons in these two categories with the levels of traumatized persons who did not meet these criteria; a higher score indicates greater interference (range=0–4). In terms of interference with work or school functioning, a main effect of symptom status was found (F=85.48, df=2, 182, p<0.0001), and post hoc testing revealed that persons with full symptoms (mean score=3.03, SD=0.66) reported significantly more interference than persons with partial symptoms (mean score=2.64, SD=1.02), who themselves reported significantly more interference than traumatized persons who had neither full nor partial PTSD (mean score=1.30, SD=0.58).

In terms of interference with home and social functioning, a main effect of symptom status was again found (F=64.84, df=2, 180, p<0.0001). Post hoc testing revealed that persons with full PTSD (mean score=2.85, SD=1.06) or partial PTSD (mean score=2.84, SD=0.81) reported significantly more interference than traumatized persons without PTSD (mean score=1.37, SD=0.63)

TABLE 3. Chronological Proximity of Trauma Designated as Most Troubling by Women and Men in a Community Sample Who Had Experienced Traumatic Events[a]

Period During Which Most-Troubling Event Occurred	Women (N=121)		Men (N=57)		Women Versus Men	
	N	%	N	%	Odds Ratio	95% Confidence Interval
Past 12 months	26	21.5	12	21.1	1.06	0.49–2.29
Past 1–5 years	26	21.5	13	22.8	0.93	0.44–1.99
Past 6–10 years	16	13.2	8	14.0	0.88	0.35–2.18
>10 years	53	43.8	24	42.1	1.04	0.54–2.01

[a]Sample distributions reflect the weighted (for gender) number of respondents rounded to the nearest whole number. Data on some variables were not available for all respondents.

TABLE 4. Current Prevalence of Full and Partial DSM-IV Posttraumatic Stress Syndrome and PTSD Among Women and Men in a Community Sample[a]

Posttraumatic Stress Syndrome or PTSD Diagnosis in Past 1 Month[b]	Women (N=524)		Men (N=478)		Women Versus Men	
	N	%	N	%	Odds Ratio	95% Confidence Interval
Posttraumatic stress syndrome						
Full	26	5.0	8	1.7	3.02	1.42–6.44
Partial	30	5.7	11	2.2	2.67	1.34–5.31
PTSD						
Full	14	2.7	6	1.2	2.21	0.86–5.70
Partial	18	3.4	1	0.3	14.06	3.37–58.71
Full or partial	32	6.0	7	1.5	4.29	2.00–9.19

[a]Sample distributions reflect the weighted (for gender) number of respondents rounded to the nearest whole number. Data on some variables were not available for all respondents.
[b]"Posttraumatic stress syndrome" indicates that the impairment/distress criterion (criterion F) may or may not have been fulfilled. "PTSD" indicates that the impairment/distress criterion was fulfilled. "Partial" indicates that one or two of the necessary criterion C symptoms were lacking or that one of the necessary two criterion D symptoms was lacking.

Help Seeking in Full Versus Partial PTSD

As an additional indicator of the extent to which their symptoms interfered with their lives, we compared the rates at which persons with full versus partial PTSD sought help. This was defined as going to see a physician, a counselor of any type, or a member of the clergy for help with problems. The rates of help seeking in the groups with full and partial PTSD were not significantly different: 12 of the 20 persons (60.0%) with full PTSD sought help, compared to 10 of the 19 persons (52.6%) with partial PTSD (continuity adjusted $\chi^2= 0.05$, df=1, n.s.).

DISCUSSION

Whereas a decade ago the diagnosis of PTSD was very narrowly applied—almost exclusively to male combat veterans—it has become better appreciated in recent years that PTSD can occur after a broad range of traumatic events (1–16). Although early community

surveys (11, 12) showed rather modest rates of PTSD (1.0%–1.3%), it is now believed that those rates were low because the need to probe repeatedly for specific events or event categories was not recognized at that time (14). However, when the methods changed to incorporate multiple probes for traumatic events, it was found that rates of trauma exposure in the community were higher than had been previously suspected (3, 4, 13–16), and in concert, rates of PTSD were correspondingly elevated (3, 4, 13–16). It is currently believed that rates of lifetime trauma exposure are in the range of 39% (13) to 84% (16); presumably, this variability depends on the nature of the specific events surveyed and the demographic characteristics of the survey sample. Lifetime rates of PTSD in the general population are currently estimated to range from 7.8% (17) to 9.2% (13), and approximately 60% of these cases seem to become chronic (16).

The prevalences of lifetime exposure to serious traumatic events in the present study (74.2% for women and 81.3% for men) were compatible with those in prior studies (13–16). This is one of the few studies to directly compare rates of traumatic experiences in men and women, and our results in this respect are remarkably similar to findings from the National Comorbidity Survey, namely, that certain classes of traumatic events are significantly more common for women (rape and sexual molestation) and certain other classes are significantly more common for men (combat, witnessing severe injury or death, being threatened with a weapon, and being involved in a serious motor vehicle accident). These findings bring up a theme that is being increasingly heard in this area of research: gender differences are important and cannot be ignored.

Our study limited its time frame to the assessment of current (in the past month) PTSD. Consequently, we are not able to report lifetime rates of PTSD that could be compared to those in prior studies (13–17). Neither are we able to determine the longitudinal course of our cases of partial PTSD, i.e., whether they originated from full cases that had incompletely resolved or whether the partial presentation is an enduring clinical entity. However, in order to achieve the primary goal of our study—to determine rates of partial PTSD—a time frame of the past 1 month was optimal from a methodological standpoint. It is extremely doubtful that acceptable reliability for subsyndromal variants of PTSD could be achieved with a "lifetime" time frame. By limiting ourselves to current symptoms and current functioning, we can be relatively certain that our assessment of these variables is reliable and that our categorization of full versus partial PTSD is valid. To the best of our knowledge, this is the first study in which a comparison of full and partial PTSD in an epidemiologic sample was attempted.

In our study, the past-month prevalence of full PTSD was 2.7% for women and 1.2% for men (a ratio of approximately 2:1). For partial PTSD the rates were 3.4% for women and 0.3% for men (a significant difference). When rates of full *or* partial PTSD are considered in aggregate, the difference between women and men is even more striking: 6.0% in women and 1.5% in men—a ratio of 4:1. These data underscore the consensus from prior studies (13–17) that PTSD, from an epidemiologic perspective, is predominantly a women's disorder. Public health measures designed to combat PTSD will necessarily need to focus on women and, specifically, on the forms of trauma that they disproportionately experience (i.e., sexual abuse and assault).

Future research will be required to determine the reasons for the high rate of PTSD among women found in this and prior surveys. One explanation might be a reporting bias, i.e., that women acknowledge more symptoms than men do on surveys. Alternatively, it could be that women are more vulnerable to PTSD after trauma exposure. Or it may be that the kinds of traumatic events experienced by women (e.g., rape and other forms of sexual assault) may be more likely to produce PTSD than the kind of events experienced by men (e.g., serious motor vehicle accidents and nonsexual forms of violent assault). Each of these explanations deserves serious consideration.

It is one thing to point out that partial PTSD exists and is prevalent (in fact, about as prevalent as full PTSD); it is another to demonstrate that it is *meaningful* from either a clinical or public health standpoint. We have been able to demonstrate that persons with partial PTSD report significantly more interference with work or education than traumatized persons with fewer symptoms, but they report significantly less interference than persons with the full disorder. In the case of interference with social and family functioning, persons with full and partial PTSD reported comparable levels of interference. Help seeking was significantly more common in persons with either full or partial PTSD than in traumatized persons without PTSD. Taken together, these preliminary observations suggest that partial PTSD carries with it a burden of disability that approaches—if not entirely matches—that produced by full PTSD. We are eager to have these findings replicated in an independent sample, by means of a more extensive set of tools to measure psychosocial functioning and quality of life. If partial PTSD is shown in other studies to rival full PTSD in its capacity to interfere with functioning, then clinicians will be well advised to broaden their diagnostic scope and to consider intervening with traumatized patients who fall short of meeting the full criteria set for PTSD. In addition, if partial PTSD is proven in future studies to be as prevalent and as disabling as our data suggest, then public health policy makers will need to tackle a considerably larger problem than had previously been imagined.

Our study has a number of potential limitations, several of which were discussed earlier (e.g., telephone survey by lay interviewers, 1-month time frame). Another potentially important limitation is our exclusive focus on PTSD without regard to comorbidity. This shortcoming, made necessary by our budgetary and other logistical limitations, leaves us unable to determine to what extent the functional interference we assessed may

have been due to comorbid conditions that are common in PTSD, e.g., major depression (30–33). Thus, future community studies of partial and full PTSD will need to document the presence of comorbid conditions and, to the extent possible, ascertain whether disability is directly attributable to PTSD symptoms or to the comorbid condition(s).

Our findings suggest that there may be little to distinguish between full and partial PTSD, and if replicated, these findings should challenge our notions about where (and indeed, *whether*) dividing lines should be drawn. This issue is not merely of theoretical taxonomic interest—it has implications for the recognition of PTSD by clinicians, for the determination of treatment needs by health insurers and health policy makers, and therefore, for determination of who may gain access to care.

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