The Prevalence of Major Depressive Episode, Generalized Anxiety Disorder and Substance Dependence among Urban American Fathers:
Evidence from the Fragile Families and Child Wellbeing Study

Current studies point to gender differences in the prevalence, etiology and effects of mental health conditions in the population. Fortunately, the requirement for gender-sensitive research focused on women's mental health has been recognized. However, the imperative for studies specifically tailored to the epidemiology and disability burdens of mental disorders among men is evolving more slowly. Moreover, a lack of available data, especially with respect to poor men and men of colour, presents a major challenge to assessing the mental health status of males, and to situating programs and policies in a framework that considers the complexities and heterogeneity of the population.

To facilitate a better understanding of the mental health status of men generally, and to inform the development of targeted and effective policies and programs for fathers, this paper takes advantage of a unique opportunity to utilize an enriched set of previously unavailable data. *The Fragile Families and Child Wellbeing Study* (FFCWS) is an ongoing longitudinal study of fathers and mothers and their children living in large cities in the United States. FFCWS is based on a sample that is racially and ethnically diverse. Additionally, the participants include both married and unmarried fathers. The unmarried fathers hold significant interest because there is reason to hypothesize that they are systematically different from married fathers in their mental health status. They are also the fastest growing contingent of fathers, the group of fathers about which the least is known, and a population of men often targeted by policymakers. Using Fragile Families data, this paper constructs a detailed mental health profile of fathers by describing the prevalence, comorbidity and course of 12-month major depressive episode, generalized anxiety disorder and substance dependence

In addition to utilizing a rich set of data to focus on a policy-relevant sample of men about whom little is currently known, this paper also extends previous research by addressing the problem of non-response bias with methodological rigor. Non-response that pertains to the male population has proven to be an intractable problem in survey research. This paper moves beyond the standard trope for dealing with missing data with the use of multiple imputation strategies.

Even though the FFCWS obtains a relatively good response rate for fathers and, furthermore, secures significant information about fathers from mothers, a more sophisticated formulation is required. Since there is reason to hypothesize that non-respondent fathers differ systematically from respondent fathers in terms of one or more key variables, traditional approaches, such as using complete cases, will yield biased estimates. Furthermore, mothers' reports prove inadequate to answer the research questions of interest in this paper. Self-reports of distress are requisite to derive a more authentic portrayal of the prevailing mental health conditions and challenges of fathers. Therefore, this analysis employs multiple imputation (MI), a principled imputation technique with the advantage of producing estimates and confidence intervals reflective of missing-data uncertainty. MI is a method that can be thought of in simple terms as "summarizing the results of simulations, where one uses the respondents to generate 'reasonable' hypothetical responses for non-respondents" (Rubin 1977). A comparison of prevalence rates based on multiple imputation with rates based on simple imputation or complete cases suggests that studies that do not account for non-response bias may produce conservative estimates of psychopathology among men, especially among poor men and men of colour.

Mulitply imputed estimates indicate that of the four psychiatric disorders reported at the 3-year interview, (major depressive episode (MDE), generalized anxiety disorder (GAD), alcohol dependence (AD) and drug dependence(DD)), the most common by far is MDE. More than 12 percent of married and 18 percent of unmarried fathers report an episode of depression in the 12 months prior to the interview. For both married and unmarried fathers, rates of MDE exceed those of GAD (by 4 and 6 percent respectively), AD (by 3 and 4 percent respectively) and DD (by 1 and 5 percent respectively).

Compared to a nationally representative sample of men interviewed in the National Comorbidity Survey (NCS), FFCWS fathers demonstrate significantly higher prevalence rates for depressive and affective disorders. A cardinal point of interest is the markedly higher prevalence rates across all disorders for unmarried compared to married fathers. Almost half again as many unmarried fathers as married fathers are likely to report a diagnosis for MDE, GAD or alcohol dependence, while

unmarried fathers are fully 2 ½ times more likely to report drug dependence. These findings are largely consistent with a body of research that describes the protective properties of marriage for mental health.

An investigation of the concentration of disorders suggests that comorbidity is an important feature of the mental health profile of fathers. Given the higher prevalence of MDE, it is not surprising that this disorder proves to be implicated more often than the other three disorders. MDE and GAD are the most highly comorbid disorders, followed by MDE and SD. GAD and SD are the least comorbid of the dyadic combinations. The majority of fathers are disorder free, and of fathers reporting disorders, most report a lone disorder. Nonetheless, fully one third again as many married fathers and one half again as many unmarried fathers report comorbid disorders as report lone disorders. Furthermore, it is evident that almost half the total number of disorders in this sample (42 percent for marrieds and 49 percent for unmarrieds) are comorbid disorders. Thus it is striking that while 15 percent of married fathers and 23 percent of unmarried fathers report any of the 4 disorders at 3-year follow up, half of the burden of these disorders is concentrated in a group of fathers who constitute 4 percent of the married sample and 7 percent of the unmarried sample. This finding corroborates cormorbidity reports of all lifetime and 12-month disorders in the NCS which show that, while a history of some psychiatric disorder is common in the United States, the lion's share of the burden is concentrated in a highly comorbid sector of society that constitutes about one sixth of the population. The comparative disadvantage of unmarried fathers compared to married fathers is evident concerning the co-occurrence of mental disorders. Compared to married fathers, roughly twice the proportion of unmarried fathers is likely to report co-occurring disorders.

When prevalence rates at the 1-year and 3-year interviews are compared, on average both married and unmarried fathers report considerably higher rates of MDE in the latter period. Thus we see a more depressed sample of fathers by the third wave of the study. Similar rates of GAD persist between the two periods. The majority of fathers report neither MDE nor GAD at the 1-year or 3-year interview (82 percent of marrieds and 74 percent of unmarrieds). For married fathers, the course of

both MDE and GAD is similar: about 10 percent of disorder-free fathers experience onset/relapse and 60 percent of disordered fathers experience recovery. However, the story differs for unmarried fathers. Even though these men are about equally likely to experience the onset/relapse of GAD or MDE, they are about 20 percent less likely to recover from MDE than GAD. This suggests that depression is more intractable than anxiety among unmarried fathers. The results for the course of any disorder, either MDE or GAD, are disturbing. Over 20 percent of unmarried fathers and about 15 percent of married fathers who are disorder-free at 1-year, report disorder at 3-years. Moreover, chances of recovery are only 50-50 for unmarried fathers and slightly better (60-40) for married fathers.