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Mental Health Among Jail and Prison Inmates

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Abstract

Previous studies provide insight into the mental health of jail and prison inmates, but this research does not compare the two groups of inmates. Using data from the Fragile Families and Child Wellbeing Study, this article examines how the association between incarceration and self-reported mental health varies by facility type, net of an array of demographic and socioeconomic characteristics. Both jail and prison inmates report high rates of depression, life dissatisfaction, heavy drinking, and illicit drug use. In adjusted logistic regression models, those incarcerated in jails, compared with those not incarcerated, have higher odds of depression (odds ratio [*OR*] = 5.06, 90% confidence interval [CI; 1.96, 13.11]), life dissatisfaction (*OR* = 3.59, 90% CI [1.40, 9.24]), and recent illicit drug use (*OR* = 4.03, 90% CI [1.49, 10.58]). Those incarcerated in prisons have higher odds of life dissatisfaction (*OR* = 3.88, 90% CI [2.16, 6.94]) and lower odds of recent heavy drinking (*OR* = 0.32, 90% CI [0.13, 0.81]) compared with those not incarcerated. Furthermore, jail inmates report significantly more depression, heavy drinking, and illicit drug use than prison inmates. These results suggest the association between incarceration and mental health may vary substantially across facilities and highlight the importance of expanding research in this area beyond studies of prisons. The results also indicate that public health professionals in the correctional system should be especially attuned to the disproportionately high levels of poor mental health outcomes among jail inmates.

Keywords

alcohol use, drug use, mental health, health inequality, incarcerated

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In response to rising (though recently stabilized) incarceration rates, a growing literature documents the detrimental consequences of incarceration for mental health (Kaeble, Glaze, Tsoutis, & Minton, 2015; National Commission on Correctional Health Care, 2002; Wildeman & Muller, 2012). Theories that articulate the negative health consequences of stress—combined with the conceptualization of incarceration as a stressful, isolating, and stigmatizing life event—motivate the exploration of the relationship between incarceration and mental health (Goffman, 1961; Massoglia & Pridemore, 2015; Schnittker, Massoglia, & Uggen, 2012; Thoits, 1995). The psychological tolls of incarceration are well documented, with early scholars describing how the confinement and regimentation of incarceration lead inmates to have higher rates of mental health disorders than they might have had if they had remained in the community (Clemmer, 1940; Goffman, 1961; Guy, Platt, Zwerling, & Bullock, 1985; Sykes, 1985/2007).

Building on these insights, as well as other research suggesting that incarceration is negatively associated with individuals' finances (Pager, 2003; Western, 2006), family ties (Lopoo & Western, 2005; Turney, 2015), and physical health (Allen, Wakeman, Cohen, & Rich, 2010; Dumont, Brockmann, Dickman, Alexander, & Rich, 2012; Macalino et al., 2004; Massoglia, 2008; Wang et al., 2009), more recent research on the psychological tolls of incarceration considers whether these consequences extend beyond the confines of the jail or prison. Studies show that individuals with an incarceration history, compared to those without an incarceration history, have a

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significantly greater likelihood of major depression, life dissatisfaction, and mood disorders such as dysthymia and that these differences are substantial (Massoglia & Pridemore, 2015; Schnittker et al., 2012; Turney, Wildeman, & Schnittker, 2012; Wildeman, Turney, & Schnittker, 2014). Thus, the consequences of incarceration on mental health are immediate, affecting the currently incarcerated, and persistent, affecting those not currently incarcerated but previously incarcerated (Turney et al., 2012).

Despite the growing literature on the mental health consequences of incarceration, no research examines differences in mental health among jail inmates and prison inmates after adjusting for demographic and socioeconomic differences. Understanding mental health among fathers in jail and prison, in particular, is especially important because fathers' incarceration—and their mental health—has consequences for the health and well-being of families and children (James & Glaze, 2006; Meadows, McLanahan, & Brooks-Gunn, 2007; Turney, 2014a; Wildeman & Muller, 2012; Wildeman, Anderson, Lee, & Karlson, 2014). Given the substantial heterogeneity in the conditions of confinement across incarceration facilities, the lack of research comparing the mental health of inmates in different types of institutions presents a notable gap (Massoglia & Warner, 2011; Wildeman, Turney, & Yi, 2016).

This article uses data from the Fragile Families and Child Wellbeing Study (FFCWS), a longitudinal survey of mostly unmarried parents in urban areas commonly used to study the individual and spillover consequences of incarceration, to consider how the relationship between current incarceration and self-reported mental health—measured as major depression, life dissatisfaction, recent heavy drinking, and recent illicit drug use—varies across jail incarceration and prison incarceration. Although there are other sources of data on jail and prison inmates, such as the Survey of Inmates in Local Jails and the Survey of Inmates in State and Federal Correctional Facilities, the FFCWS are the most appropriate data for this study for three key reasons. First, the longitudinal nature of the FFCWS provides critical information for estimating models that account for factors that precede incarceration. Second, and relatedly, the richness of these data allows for the inclusion of controls that are associated with selection into incarceration (e.g., prior incarceration and impulsivity). Finally, though the FFCWS necessarily excludes men who are not parents, research finds that these fathers are similar to fathers in jail, state prison, and federal prison in the United States, allowing for some level of comparability with other research (Turney & Wildeman, 2013).

The analysis includes three stages. First, the article presents descriptive statistics of variables in the analysis, comparing groups by incarceration status and facility types. Next, mental health outcomes are estimated as a function of current incarceration in order to show that this study's results align with prior research that used these data but were unable to compare across facility types (Turney, Wildeman et al., 2012). Finally, incarcerated fathers are disaggregated to estimate mental health as a function of facility type (measured as no incarceration, jail incarceration, state or federal prison incarceration, and unknown facility type). These analyses adjust for a number of demographic, socioeconomic, and behavioral characteristics associated with nonrandom selection into incarceration, including lagged measures of mental health and incarceration history. They thus provide the first systematic accounting of how facility type is differentially associated with mental health and, in doing so, contribute vital insight to research on the social determinants of mental health in an era of mass incarceration. Furthermore, this research has implications for both the well-being of incarcerated fathers and the well-being of the family members connected to them.

Method

Data

To explore how the relationship between incarceration and mental health varies across facility types, this study uses data from the FFCWS, a longitudinal survey of biological parents of children born between 1998 and 2000 in urban areas in the United States (Reichman, Teitler, Garfinkel, & McLanahan, 2001). Baseline interviews with mothers were conducted in hospitals immediately following the focal child's birth. Corresponding baseline interviews with fathers were conducted as soon as possible after the birth (often in hospitals). Follow-up telephone interviews with mothers and fathers occurred 1, 3, 5, and 9 years after the focal child's birth. The FFCWS data have been used extensively to study the consequences of incarceration on a wide range of dimensions of social life, including family functioning, children's well-being, and adults' mental health (Geller, Cooper, Garfinkel, Schwartz-Soicher, & Mincy, 2012; Haskins, 2014; Schnittker et al., 2012; Turney, 2014b; Turney, 2014c; Turney & Haskins, 2014; Turney et al. 2012; Turney & Wildeman, 2013; Wildeman, 2010; Wildeman et al., 2014). However, no research to date considers the relationships between incarceration *facility type* and mental health (Wildeman et al., 2016).

The analytic sample includes the 3,139 fathers with nonmissing data on all four outcome variables, measured at the 5-year survey, the most recent survey wave in which information about facility type is available. The analytic and full FFCWS samples differ on some baseline

characteristics. For example, fathers in the analytic sample, compared with fathers in the full sample, are statistically significantly more likely to be non-Hispanic White (20.6% vs. 14.2%), less likely to be foreign-born (15.7% vs. 21.4%), and less likely to be in a relationship with a new partner (15.2% vs. 24.2%). On average, educational attainment among fathers in the analytic sample is higher than that of the entire FFCWS sample (34.1% vs. 26.4% have at least some college education). The covariates were missing for an average of 22.9% of observations; these observations are preserved with multiple imputation (n = 20 data sets) and by averaging results across imputations using "mi impute" in Stata (StataCorp, 2013a).

Dependent Variables

The dependent variables include four binary indicators of self-reported mental health, all measured at the 5-year survey: (a) depression, indicating the father had major depressive disorder in the past year, based on the Composite International Diagnostic Short-Form (Kessler, Andrews, Mroczek, Ustun, & Wittchen, 1998); (b) life dissatisfaction, indicating the father reported being "somewhat dissatisfied" or "dissatisfied" with his life; (c) heavy drinking, indicating the father had five or more drinks in one sitting in the past month; and (d) illicit drug use, indicating the father used illegal drugs (sedatives, tranquilizers, amphetamines, analgesics, inhalants, marijuana, cocaine or crack, lysergic acid diethylamide, heroin, or other illicit drugs), drugs without a doctor's prescription, or in larger amounts or for a longer duration than prescribed in the past month. This article uses the term "heavy drinking" to differentiate from "binge drinking" as there is ambiguity around the exact definition and temporal frame of the latter (e.g., in the past 2 weeks vs. in the past month; Courtney & Polich, 2009; Naimi et al., 2003; U.S. Department of Agriculture, 2015). Although heavy drinking and illicit drug use are not universally considered stand-alone measures of mental health, this study includes these indicators due to the documented prevalence of comorbidity between substance use and poor mental health (Grant et al., 2004; Hedden et al., 2015).

Explanatory Variables

These analyses focus on two key explanatory variables. First, *current incarceration* is measured with a binary variable indicating the respondent was incarcerated at the 5-year survey. The father is "currently incarcerated" if either the mother or father reports he is incarcerated, as individuals tend to underreport incarceration (Geller, Jaeger, & Pace, 2016; Groves, 2004). Second, *facility type* is measured with four mutually exclusive binary variables: (a) jail incarceration, indicating the respondent is incarcerated in a local jail at the 5-year survey; (b) prison incarceration, indicating the respondent is incarcerated in a state or federal prison at the 5-year survey; (c) unknown facility type, indicating the respondent's facility type at the 5-year survey is unknown; and (d) no incarceration, indicating the respondent is not currently incarcerated. Facility type is asked of mothers who report the father is currently incarcerated, but it is not asked of fathers. Therefore, when facility type is unknown, it is usually because mothers were not asked about facility type (either because she did not participate in the interview or because she did not report the father was incarcerated; Wildeman et al., 2016). Alternative analyses using exclusively mothers' reports of fathers' incarceration status yielded similar results (not reported).

Covariates

The multivariate analyses adjust for an array of demographic, socioeconomic, and behavioral characteristics associated with incarceration and mental health. The following variables are measured at the baseline survey: race/ethnicity (non-Hispanic White, non-Hispanic Black, Hispanic, non-Hispanic other race), foreign-born status, age, educational attainment (less than high school, high school diploma or GED, more than high school), and number of children in the household. Impulsivity is measured at the 1-year survey. A binary measure of prior incarceration indicates the respondent experienced incarceration at some point up to or at the 3-year survey. Finally, the remaining variables are measured at the 3-year survey: domestic violence (mother's reports of father's violence toward her), employment status, income-to-poverty ratio, homelessness status, self-reported health (ranging from 1 [*poor*] to 5 [*excellent*]), relationship status with the child's mother (married, cohabiting, nonresidential romantic relationship, no romantic relationship), whether the father repartnered with someone besides the child's mother, and lagged dependent variables (depression, life dissatisfaction, heavy drinking, and illicit drug use). To account for temporal differences in the measurement of facility type and mental health, the analyses also adjust for the time difference between the mother's and father's 5-year surveys (measured in months).

Additional models control for three measures of facility type history, as reported by combined mother's and father's survey responses: whether the father was in jail at either previous (1-year and 3-year) survey, whether he was in prison at either previous survey, and whether he was in an unknown facility during either previous survey. These measures of facility type history are not mutually exclusive. All variables are reported by fathers unless indicated otherwise. See Table 1 for descriptive statistics of all variables.

Table 1. Descriptive Statistics of Variables in Analysis: Fragile Families and Child Wellbeing Study.

	All			Currently incarcerated			Never incarcerated			Ever incarcerated		
	N	%	*M* (*SD*)	*N*	%	*M* (*SD*)	*N*	%	*M* (*SD*)	*N*	%	*M* (*SD*)
Explanatory variables												
Current incarceration	225	7.2		225	100.0		0	0.0		225	17.2	
Facility type												
Jail incarceration	23	0.7		23	10.2		0	0.0		23	1.8	
Prison incarceration	68	2.2		68	30.2		0	0.0		68	5.2	
Unknown facility type	134	4.3		134	59.6		0	0.0		134	10.2	
No incarceration	2,914	92.8		0	0.0		1,829	100.0		1,085	82.8	
Control variables												
Race/ethnicity												
Non-Hispanic White	648	20.6		8	3.6		501	27.4		147	11.2	
Non-Hispanic Black	1,536	48.9		166	73.8		728	39.8		808	61.7	
Hispanic	823	26.3		41	18.2		513	28.1		310	23.7	
Non-Hispanic Other	132	4.2		10	4.4		87	4.8		45	3.4	
Foreign-born	498	15.7		6	4.9		410	22.4		88	6.7	
Age			28.0 (7.3)			25.3 (7.3)			29.3 (7.3)			26.2 (6.9)
Educational attainment												
Less than high school	977	31.2		112	49.8		437	23.9		540	41.2	
High school, GED, or equivalent	1,095	34.8		96	42.2		554	30.3		541	41.3	
Postsecondary education	1,067	34.1		17	8.0		838	45.8		229	17.5	
Employed	2,469	78.2		100	46.2		1,619	88.5		850	64.9	
Relationship status with child's mother												
Married	1,168	37.5		19	8.4		944	51.6		224	17.1	
Cohabiting	690	21.9		31	14.2		388	21.2		302	23.1	
Noncohabiting	194	6.0		28	12.4		84	4.6		110	8.4	
No romantic relationship	1,087	34.6		147	64.9		413	22.6		674	51.5	
New romantic partner	467	15.2		55	26.2		181	9.9		286	21.8	
Domestic violence	247	7.9		29	12.0		61	3.3		186	14.2	
Number of children in household			1.0 (1.2)			1.1 (1.3)			1.0 (1.1)			1.0 (1.3)
Self-rated health			4.1 (1.0)			4.0 (1.0)			4.0 (0.9)			3.9 (1.0)
Prior incarceration	1,216	38.7		202	89.8		0	0.0		1,216	92.8	
Homelessness	176	5.5		21	10.2		62	3.4		114	8.7	
Impulsivity			2.0 (0.7)			2.2 (0.7)			1.9 (0.6)			2.2 (0.7)
Income-to-poverty ratio			2.7 (3.3)			1.9 (3.3)			3.2 (3.5)			2.0 (3.1)
Months between mother and father interviews			1.6 (2.2)			2.6 (2.3)			1.4 (2.1)			1.9 (2.3)
Depression (lagged)	467	14.5		60	27.1		190	10.4		277	21.2	
Life dissatisfaction (lagged)	388	12.1		68	29.8		127	6.9		261	19.9	
Heavy drinking (lagged)	894	28.1		50	22.2		526	28.8		368	28.1	
Illicit drug use (lagged)	305	9.8		39	16.9		112	6.1		193	14.7	
Jail at Year 1 or Year 3	85	2.7		39	15.6		0	0.0		85	6.5	
Prison at Year 1 or Year 3	66	2.1		35	14.7		0	0.0		65	5.0	
Unknown facility at Year 1 or Year 3	207	6.5		88	37.3		0	0.0		205	15.7	
N		3,139			225			1,829			1,310	

Note. Estimates are unweighted and come from a single imputation of the multiply-imputed data.

Analytical Approach

The analysis proceeds in three stages, all conducted in Stata 14.1 (StataCorp, 2015). The first analytic stage presents descriptive statistics of variables included in the analysis, first by incarceration status. We report the means and frequencies of all variables for the following overlapping subgroups: those currently incarcerated, those ever incarcerated prior to the 5-year survey, and those never incarcerated. The first analytic stage also compares mental health across facility type among the currently incarcerated. The second analytic stage uses multivariate logistic regression to model the odds of depression, life dissatisfaction, heavy drinking, and illicit drug use as a function of current incarceration. Although the primary goal of this study is to compare fathers incarcerated in local jails with fathers incarcerated in state and federal prisons, this first comparison of currently incarcerated fathers with not currently incarcerated fathers allows for a consideration of these results in relation to prior research

Table 2. Descriptives of Outcome Variables, by Incarceration History and Facility Type: Fragile Families and Child Wellbeing Study.

			Currently incarcerated											
	All		All		Jail		Prison		Unknown		Never incarcerated		Ever incarcerated	
	N	%	*N*	%	*N*	%	*N*	%	*N*	%	*N*	%	*N*	%
Depression	364	11.6	59	26.2***	9	39.1***	14	20.6***	36	26.9***	149	8.2	215	16.4***
Life dissatisfaction	414	13.2	98	43.6***	10	43.5***	30	44.1***	58	43.3***	143	7.8	271	20.7***
Heavy drinking	601	19.1	28	12.4**	5	21.7	6	8.8*	17	12.7*	338	18.5	263	20.1***
Illicit drug use	294	9.4	47	20.9***	8	34.8***	7	10.3	32	23.9***	91	5.0	203	15.5***
N	3,139		225		23		68		134		1,829		1,310	

Note. Estimates are unweighted and come from a single imputation of the multiply-imputed data. For the currently incarcerated, the asterisks indicate statistically significant differences between each category and those not currently incarcerated. In the last column, the asterisks indicate statistically significant differences between the ever incarcerated and the never incarcerated.
*$p < .05$. **$p < .01$. ***$p < .001$.

on incarceration and mental health. Finally, in the third analytic stage, the odds of depression, life dissatisfaction, heavy drinking, and illicit drug use are estimated as a function of current facility type and incarceration status (jail incarceration, prison incarceration, facility type unknown, and no current incarceration [reference group]).

The second and third analytic stages each estimate six models that incrementally account for observed and unobserved factors that are associated with the relationship between current incarceration and mental health. Model 1 estimates the odds of each outcome as a function of current incarceration. Model 2 adjusts for the demographic, socioeconomic, and behavioral covariates described above. Model 3 further adjusts for a lagged dependent variable. Models 2 and 3 adjust for prior incarceration, but Models 4 through 6 account for incarceration history in alternative ways. Model 4 adjusts for the same variables as Model 3 and restricts the sample to ever incarcerated fathers, allowing for a comparison of currently incarcerated fathers to previously but not currently incarcerated fathers. Model 5, estimated for the full sample, replaces the measure of prior incarceration with measures of prior facility type (jail, prison, unknown). Model 6 estimates Model 5 but restricts the sample to ever incarcerated fathers. All multivariate analyses report 90% confidence intervals (CIs) because of the small number of fathers incarcerated in jails and prisons ($n = 91$).

Results

The mental health of fathers, first by incarceration status and history (currently incarcerated, ever incarcerated, and never incarcerated) and then by facility type (jail incarceration, prison incarceration, unknown facility type) are compared in Table 2. In the overall analytic sample, 11.6% of fathers reported depression, 13.2% reported life dissatisfaction, 19.1% reported heavy drinking, and 9.4% reported illicit drug use. Currently incarcerated fathers, compared with fathers not currently incarcerated, were significantly more likely to report depression (26.2% vs. 10.5%), life dissatisfaction (43.6% vs. 10.8%), and illicit drug use in the past month (20.9% vs. 8.5%). Currently incarcerated fathers were significantly less likely to report heavy drinking in the past month than fathers not currently incarcerated (12.4% vs. 19.7%). There are also differences in mental health between fathers with and without incarceration histories. Fathers who have ever been incarcerated are two to three times more likely to be depressed (16.4% vs. 8.2%), dissatisfied with life (20.7% vs. 7.8%), and report illicit drug use (15.5% vs. 5.0%) than never incarcerated fathers. Ever incarcerated fathers are also slightly more likely to report heavy drinking than those who have never been incarcerated (20.1% vs. 18.5%).

Comparing across facility types among the incarcerated, there are also observable descriptive differences in mental health. Fathers incarcerated in jails were almost twice as likely as fathers incarcerated in prisons to report depression (39.1% vs. 20.6%). Fathers incarcerated in jails were also more than twice as likely to report heavy drinking (21.7% vs. 8.8%) and three times as likely to report illicit drug use (34.8% vs. 10.3%) than those in prisons. There were no differences in life dissatisfaction between jail and prison inmates (43.5% vs. 44.1%). The frequency of mental health problems among those incarcerated in an unknown facility type fell between that of jail inmates and prison inmates on all measures.

In Table 3, mental health is estimated as a function of current incarceration. Current incarceration is associated with worse mental health across three of the four outcomes, largely confirming prior research on the negative association between incarceration and mental

Table 3. Logistic Regression Models Estimating Mental Health as a Function of Current Incarceration: Fragile Families and Child Wellbeing Study.

	Model 1		Model 2		Model 3		Model 4		Model 5		Model 6	
	N = 3,139		*N* = 3,139		*N* = 3,139		*N* = 1,310		*N* = 3,139		*N* = 1,310	
	OR	90% CI	*OR*	90% CI	*OR*	90% CI	*OR*	90% CI	*OR*	90% CI	*OR*	90% CI
Depression	3.04	[2.21, 4.19]	2.24	[1.54, 3.25]	2.11	[1.43, 3.11]	1.89	[1.27, 2.79]	1.97	[1.27, 3.04]	1.81	[1.18, 2.78]
Life dissatisfaction	6.34	[4.76, 8.46]	3.69	[2.65, 5.15]	3.67	[2.57, 5.24]	3.76	[2.59, 5.45]	3.67	[2.57, 5.24]	3.76	[2.59, 5.45]
Heavy drinking	0.58	[0.39, 0.87]	0.58	[0.38, 0.90]	0.61	[0.38, 0.99]	0.70	[0.43, 1.14]	0.56	[0.34, 0.93]	0.64	[0.38, 1.05]
Illicit drug use	2.85	[2.02, 4.03]	1.54	[1.04, 2.28]	1.70	[1.09, 2.63]	1.64	[1.05, 2.57]	1.53	[0.95, 2.48]	1.39	[0.86, 2.23]

Note. *OR* = odds ratio; CI = confidence interval. Each row represents a separate dependent variable. Model 1 is an unadjusted model. Model 2 adjusts for all covariates. Model 3 adjusts for all covariates and a lagged dependent variable. Model 4 adjusts for all covariates and a lagged dependent variable and restricts the analysis to individuals with a history of incarceration. Model 5 is the equivalent of Model 3 but substitutes jail, prison, or an unknown facility type in Years 1 or 3 for prior incarceration. Model 6 is the equivalent of Model 5 but restricts the sample to individuals with a history of incarceration.

health (Turney et al., 2012; Wildeman et al., 2014). In Model 1, the unadjusted model, incarcerated fathers, compared with their not incarcerated counterparts, had 3.04 times the odds of depression, 90% CI [2.21, 4.19], 6.34 times the odds of life dissatisfaction, 90% CI [4.76, 8.46], and 2.85 times the odds of illicit drug use, 90% CI [2.02, 4.03]. Currently incarcerated fathers had lower odds of heavy drinking (*OR* = 0.58, 90% CI [0.39, 0.87]). In Model 2, which adjusts for demographic, socioeconomic, and behavioral characteristics, the associations are reduced in magnitude but remain statistically significant. In Model 3, which further adjusts for a lagged dependent variable, the associations between incarceration and depression and life dissatisfaction are again reduced in magnitude, but associations between incarceration and heavy drinking and illicit drug use increase slightly in magnitude. In this full model, our preferred model because it adjusts for a lagged dependent variable and uses the full sample, currently incarcerated fathers had two times the odds of depression (*OR* = 2.11, 90% CI [1.43, 3.11]), nearly four times the odds of life dissatisfaction (*OR* = 3.67, 90% CI [2.57, 5.24]), and just under two times the odds of illicit drug use (*OR* = 1.70, 90% CI [1.09, 2.63]) compared with fathers not currently incarcerated. Currently incarcerated individuals had lower odds of heavy drinking (*OR* = 0.61, 90% CI [0.38, 0.99]).

Additional analyses restrict the sample to ever incarcerated fathers (Model 4), adjust for more detailed measures of incarceration history (Model 5), or do both (Model 6). The statistically significant association between current incarceration and depression and life dissatisfaction persist, though the models using the restricted sample show no association between incarceration and heavy drinking and illicit drug use.

Table 4 presents logistic regression models that disaggregate incarcerated fathers by facility type. In Model 1, the unadjusted model, fathers in jails, compared with not incarcerated fathers, had higher odds of depression (*OR* = 5.50, 90% CI [2.36, 12.81]), life dissatisfaction (*OR* = 6.32, 90% CI [2.75, 14.54]), and illicit drug use (*OR* = 5.76, 90% CI [2.42, 13.72]). Fathers in prison, compared with not incarcerated fathers, had higher odds of depression (*OR* = 2.22, 90% CI [1.22, 4.04]) and life dissatisfaction (*OR* = 6.49, 90% CI [3.97, 10.62]). Fathers in prison had similar odds of illicit drug use (*OR* = 1.24, 90% CI [0.56, 2.74]) and lower odds of heavy drinking (*OR* = 0.40, 90% CI [0.17, 0.92]) compared with their not incarcerated counterparts. Postestimation tests considered statistically significant differences in mental health between fathers in jail, fathers in prison, and fathers in unknown facility types (noted with superscripts in Table 4). Fathers in jails had higher odds of depression than fathers in prisons (p = .082), and those in both jails (p = .009) and unknown facilities (p = .025) had higher odds of illicit drug use than fathers in prisons.

In Model 2 (which accounts for demographic, socioeconomic, and behavioral characteristics) and Model 3 (which adjusts for lagged dependent variables), most of the associations decline in magnitude but persist in statistical significance. In the final model, Model 3, fathers in jail, compared with not incarcerated fathers, had five times higher odds of depression (*OR* = 5.06, 90% CI [1.96, 13.11]) and more than three times higher odds of life dissatisfaction (*OR* = 3.59, 90% CI [1.40, 9.24]) and illicit drug use (*OR* = 4.03, 90% CI [1.49, 10.85]). Fathers in prison had higher odds of life dissatisfaction (*OR* = 3.88, 90% CI [2.16, 6.94]) and lower odds of heavy drinking (*OR* = 0.32, 90% CI [0.13, 0.81]) compared with their not incarcerated counterparts. Fathers incarcerated in unknown facility types had higher odds of depression (*OR* = 2.06, 90% CI [1.28, 3.30]), life dissatisfaction (*OR* = 3.58, 90% CI [2.33, 5.52]), and illicit drug use (*OR* = 1.85, 90% CI [1.09, 3.15]) compared with their not incarcerated counterparts. The final model shows that fathers in jails, compared with fathers in prisons, had greater odds of depression (p = .043), heavy drinking (p = .062), and illicit drug use (p = .017) and that fathers in jails also had greater odds of depression than those in unknown facilities (p = .085).

Table 4. Logistic Regression Models Estimating Mental Health as a Function of Facility Type: Fragile Families and Child Wellbeing Study.

	Model 1		Model 2		Model 3		Model 4		Model 5		Model 6	
	N = 3,139		*N* = 3,139		*N* = 3,139		*N* = 1,310		*N* = 3,139		*N* = 1,310	
	OR	90% CI	*OR*	90% CI	*OR*	90% CI	*OR*	90% CI	*OR*	90% CI	*OR*	90% CI
Depression												
Jail	5.50	[2.36, 12.81][a]	4.62	[1.85, 11.53][a]	5.06	[1.96, 13.11][a,b]	4.22	[1.67, 10.66][a,b]	4.44	[1.67, 11.78][a]	3.57	[1.38, 9.21][a]
State or federal prison	2.22	[1.22, 4.04][a]	1.74	[0.91, 3.32][a]	1.58	[0.80, 3.11][a]	1.44	[0.74, 2.83][a]	1.47	[0.73, 3.00][a]	1.37	[0.68, 2.76][a]
Unknown	3.14	[2.11, 4.69]	2.19	[1.39, 3.45]	2.06	[1.28, 3.30][b]	1.82	[1.13, 2.93)[b]	1.93	[1.15, 3.22]	1.80	[1.09, 2.99]
Life dissatisfaction												
Jail	6.32	[2.75, 14.54]	3.50	[1.44, 8.53]	3.59	[1.40, 9.24]	3.78	[1.46, 9.75]	3.24	[1.21, 8.64]	3.15	[1.18, 8.39]
State or federal prison	6.49	[3.97, 10.62]	4.00	[2.33, 6.85]	3.88	[2.16, 6.94]	3.87	[2.14, 6.98]	3.57	[1.96, 6.51]	3.41	[1.87, 6.24]
Unknown	6.27	[4.37, 9.00]	3.58	[2.39, 5.36]	3.58	[2.33, 5.52]	3.70	[2.35, 5.80]	3.28	[2.08, 5.19]	3.31	[2.08, 5.26]
Heavy drinking												
Jail	1.13	[0.42, 3.07]	1.31	[0.47, 3.66][a]	1.25	[0.41, 3.81][a]	1.41	[0.46, 4.33][a]	1.10	[0.36, 3.37][a]	1.22	[0.39, 3.76][a]
State or federal prison	0.40	[0.17, 0.92]	0.34	[0.14, 0.80][a]	0.32	[0.13, 0.81][a]	0.37	[0.15, 0.94][a]	0.29	[0.11, 0.75][a]	0.33	[0.13, 0.85][a]
Unknown	0.59	[0.35, 1.00]	0.63	[0.37, 1.10]	0.72	[0.39, 1.30]	0.82	[0.45, 1.49]	0.67	[0.36, 1.23]	0.75	[0.41, 1.38]
Illicit drug use												
Jail	5.76	[2.42, 13.72][a]	2.91	[1.16, 7.30][a]	4.03	[1.49, 10.85][a]	3.99	[1.48, 10.78][a]	3.95	[1.40, 11.15][a]	3.49	[1.26, 9.68][a]
State or federal prison	1.24	[0.56, 2.74][a,c]	0.66	[0.29, 1.50][a,c]	0.82	[0.33, 2.02][a]	0.78	[0.31, 1.92][a,c]	0.75	[0.29, 1.88][a]	0.64	[0.25, 1.62][a,c]
Unknown	3.39	[2.23, 5.15][c]	1.88	[1.18, 3.00][c]	1.85	[1.09, 3.15]	1.80	[1.05, 3.07][c]	1.66	[0.95, 2.92]	1.53	[0.88, 2.66][c]

Note. OR = odds ratio; CI = confidence interval. Each row represents a separate dependent variable. Model 1 is an unadjusted model. Model 2 adjusts for all covariates. Model 3 adjusts for all covariates and a lagged dependent variable. Model 4 adjusts for all covariates and a lagged dependent variable and restricts the analysis to individuals with a history of incarceration. Model 5 is the equivalent of Model 3 but substitutes jail, prison, or an unknown facility type in Years 1 or 3 for prior incarceration. Model 6 is the equivalent of Model 5 but restricts the sample to individuals with a history of incarceration.

[a]Coefficient for jail incarceration is statistically different from coefficient for prison incarceration at 90% CI. [b]Coefficient for jail incarceration is statistically different from coefficient for unknown incarceration at 90% CI. [c]Coefficient for prison incarceration is statistically different from coefficient for unknown incarceration at 90% CI.

Models 4 through 6, which restrict the sample to ever incarcerated fathers and/or include more detailed measures of incarceration history, yield similar estimates of the associations of incarceration in different facilities and the mental health outcomes examined in these analyses. In the most conservative model, Model 6, jail inmates have higher odds of depression (*OR* = 3.57, 90% CI [1.38, 9.21]), life dissatisfaction (*OR* = 3.15, 90% CI [1.18, 8.39]), and illicit drug use (*OR* = 3.49, 90% CI [1.26, 9.68]) than those not incarcerated, and prison inmates have higher odds of life dissatisfaction (*OR* = 3.41, 90% CI [1.87, 6.24]) and lower odds of heavy drinking (*OR* = 0.33, 90% CI [0.13, 0.85]) than those not incarcerated. Jail inmates have a higher odds of being depressed (p = .09), heavy drinking (p = .07), and illicit drug use (p = .01) than prison inmates and inmates in unknown facility types and have a higher odds of illicit drug use (p = .09) than prison inmates.

Finally, supplemental analyses disaggregate fathers in state prisons and fathers in federal prisons to examine mental health differences between those groups. The results (not presented) suggest no statistically significant differences.

Discussion

With the rapid expansion of the U.S. incarceration rate over the past four decades, examination of the broader consequences of incarceration has been a matter of social and public health significance. In the domain of mental health, research reports that fathers' current incarceration is associated with more life dissatisfaction relative to both recently incarcerated fathers and not recently incarcerated fathers and that the formerly incarcerated are at higher risk of depression relative to the never incarcerated (Schnittker et al., 2012; Steadman, Osher, Robbins, Case, & Samuels, 2009; Turney et al. 2012; Wildeman et al., 2014). Using data from the FFCWS, a data source that includes a relatively large number of currently incarcerated fathers, this study addresses an important and persistent gap in the literature on incarceration and mental health—differences in mental health among jail and prison inmates.

These analyses suggest two main conclusions. First, the analyses confirm prior research that identifies negative associations between incarceration and mental health. Fathers incarcerated at the time of survey, compared with their not currently incarcerated counterparts, had higher risks of depression, life dissatisfaction, and illicit drug use but a lower risk of heavy drinking at the time of survey. Second, the analyses reveal new information about between-facility differences in the mental health of currently incarcerated fathers. Those incarcerated in jails had higher risks of depression, heavy drinking, and illicit drug use than those incarcerated in prisons. These differences are substantial and indicate that correctional facility type could moderate the consequences of incarceration for the well-being of inmates. Furthermore, these associations are robust to estimation on a more conservative sample of fathers with incarceration histories as well as the use of more detailed controls for incarceration history and facilities.

There are good reasons to expect that jail incarceration and prison incarceration are differentially associated with mental health, both because of differences across the inmates in jails and prisons and because of the differences in circumstances that shape incarceration experiences in jails and in prisons (Fitzpatrick & Myrstol, 2011; Irwin, 1986). First, jail incarceration may be associated with higher levels of uncertainty with respect to both the inmates' own incarceration and the conditions of the jail, and this uncertainty may be deleterious for inmates' mental health. The majority of jail inmates are being held for pretrial detention rather than to serve a sentence following a conviction (Minton & Zeng, 2014). Jails experience much more frequent turnover than prisons; instability in the jail population, and therefore, the social contexts of inmates, may have a negative impact on poorer mental health (Irwin, 1986; O'Toole, 1997).

Another potential explanation for these observed differences may be the result of behaviors prior to incarceration, such as drug use, and the extent to which differences in jail and prison confinement interrupt those behaviors. First, variations in sentence length among jail and prison inmates may result in systematic differences in the length of time an individual has had to abstain from substance use, making it more or less likely that they are consuming alcohol or using drugs, for example, at a later point in time. Furthermore, jail and prison inmates have different, perhaps unequal, access to on-site physical and mental health services that may mitigate poor mental health outcomes such as those examined in this article. Studies of health services at incarceration facilities indicate that the relatively smaller budgets, larger inmate volume, and higher turnover in jails present challenges for streamlining care for inmates as they move in and out of facilities (Oegloff, Roesch, & Hart, 1994; Shalev, Chiasson, Dobkin, & Lee, 2011; Wilper et al., 2009). Though the findings of this study primarily identify differences between jail and prison incarceration, the results indicate that fathers incarcerated in unknown facilities also experience poorer mental health on certain outcomes than those not incarcerated or even compared with fathers in other known facilities. One reason for this association may be that the mothers' lack of information about the facility in which the father is incarcerated may be indicative of changes to, tension in, or the absence of a relationship between the two parents, which may be associated with poorer mental health (Wildeman et al., 2016).

Though these results provide evidence of variation across facility types in the mental health of incarcerated fathers and provide a starting point for further research on variation across facility types, this study has limitations, many of which are shared within the community researching incarceration and health. First, 60% of the incarcerated analytic sample is missing information on correctional facility type, which places clear limits on the statistical comparisons between fathers incarcerated in jails and prisons that can be drawn from this study's models. Efforts to obtain more information about the correctional facilities in which individuals are incarcerated are critical for development of a more accurate understanding of the unintended and collateral consequences of incarceration for mental health. Second, although information about correctional facility type is an important contribution of this study, there are several other aspects of the incarceration experience that could moderate the association between incarceration and mental health. For example, as aforementioned, the current study cannot examine or account for variation by offense type or duration of incarceration, though both may be predictors of mental health outcomes.

By identifying that fathers incarcerated in jails have higher odds of depression, heavy drinking, and illicit drug use than those incarcerated in prisons, these analyses make a significant contribution to the current scholarship. These results highlight the importance of studying incarceration as an experience that varies with the nature and circumstances of the incarceration itself. Examinations of the association between length of incarceration, experience or time spent in solitary confinement, or distance from the inmate's social ties outside of the facility with mental health outcomes, for example, may be fruitful for deepening understanding of the association between incarceration and mental health. The results of these analyses also highlight the importance of studying jails, especially important because both research and public discourse on incarceration have focused heavily on prisons. Furthermore, as this research speaks specifically to differences in the association between incarceration and mental health among incarcerated *fathers* across facility types, this study illuminates directions for future research on the implications of this association and its variation for the well-being of children and families linked to current and former inmates.

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