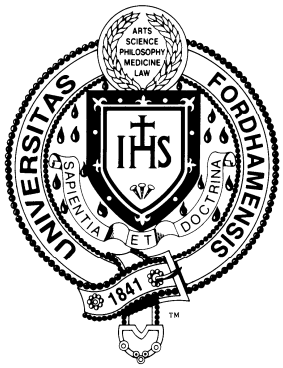

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Poverty and Psychiatric Diagnosis in the U.S.: Evidence from the Medical Expenditure Panel Survey

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Poverty and Psychiatric Diagnosis in the U.S.: Evidence from the Medical Expenditure Panel Survey.

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Abstract:

Background: A number of social programs are targeted at persons with psychiatric diagnosis with the intention of reducing poverty. Previous studies have shown that persons with psychiatric conditions are more likely to be poor and face disparities in education and employment outcomes. A better understanding of the severity of poverty faced by persons and families with diagnosis is necessary for better policy targeting and monitoring.

Aims of the Study: This paper seeks to measure the prevalence, depth and severity of poverty for families with persons with psychiatric diagnoses in the United States using data from the 2007 Medical Expenditure Panel Survey (MEPS). We compare poverty profiles of families with diagnosis to those without.

Methods: First, we calculate poverty rate, gap and severity using MEPS data for families with and without diagnosis. Second, we present results of multivariate analysis of the association between psychiatric diagnosis and poverty after controlling for a number of characteristics.

Results: This paper finds that the poverty rate, depth, and severity are significantly greater for families with a working-age member who has been diagnosed. Median and mean total incomes are lower while health expenditures are higher for families with psychiatric diagnosis. In a multivariate regression, the odds that a family is poor is 1.76 times higher for a family with a diagnosis compared to a family without a diagnosis. We also identify groups who are the most disadvantaged according to severity of income poverty among families with diagnoses. These include families whose head of family has no high school education, whose head has been unemployed for the entire year, or whose head is Black or Hispanic. Families with non-married heads face greater severity of poverty, as do single persons. Families with more severe psychiatric diagnoses, including mood and psychotic disorders, are also found to face more severe poverty.

Discussion: There is a statistically significant association between poverty and psychiatric diagnosis, in particular for mood and psychotic diagnoses. This result suggests that existing poverty reduction programs have not adequately reached this population. The analysis has several limitations. The MEPS is not representative of the entire working age population with psychiatric diagnoses, likely leading to underestimates of their poverty. Our study also does not attempt to answer the question of what are the causes of poverty, but has limited the analysis to highlight family and

individual characteristics that are statistically related to poverty. Additionally, this study does not account for the multi-dimensional nature of poverty but uses income as the exclusive metric of economic well-being.

Implications for Health Care Provision and Use: We find that families with diagnosis have a lower standard of living, largely due to lower incomes and to higher out-of-pocket medical expenditures. This may affect the health of their members through reduced access to health inputs, including access to health care.

Implications for Health Policies: This study suggests that there is a strong association between psychiatric diagnosis and poverty, and points to a need to break this association perhaps with mental health policies that specifically address poverty.

Implications for Further Research: The results point to the need for additional research in a number of areas: trends in poverty for households with diagnoses over time; mobility and persistence of poverty for this group; and the association of diagnosis to other, non-monetary dimensions of poverty, such as a lack of social integration.

Introduction

This paper seeks to measure the prevalence, depth and severity of poverty for families with persons with psychiatric diagnoses in the United States using data from the 2007 Medical Expenditure Panel Survey.

To carefully and regularly assess poverty within families with psychiatric diagnosis is essential for several reasons. First of all, persons and families with diagnosis have been the target of several policies and programs aimed at reducing poverty, such as SSI (Supplemental Security Income). In 2002, 33.7% of working age SSI beneficiaries, and 28.1% of disabled workers on SSDI (Social Security Disability Insurance) had psychiatric disabilities (1). Since SSI beneficiaries with mental conditions are generally younger than other beneficiaries, these percentages keep growing (2). However, such benefits may not be sufficient to reduce poverty. Indeed, in 2006, SSI and SSDI recipients' average monthly incomes stood at $470 and $943 respectively (1). Furthermore, the purchasing power of such income support has not kept up with changes in the cost of living.

Secondly, it is already established that people with psychiatric diagnoses are more likely to be poor that persons without. Approximately one in three persons with psychiatric disabilities live at or below the federal poverty line, compared to 10% for persons without (1, 3). Kessler et al. found a $16,306 difference in mean annual earnings between persons with psychiatric diagnoses and those without (4). However, available evidence is limited and outdated. We seek to add to this evidence using traditional economic tools to measure poverty. There has been little systematic effort to assess the extent, depth and severity of poverty in this group overall and by diagnosis type. In fact, much of the relevant literature on income deprivation is focused on working-age adults with disabilities (5, 6), with only an occasional breakdown by broad disability type, including psychiatric disability (3). Little is known on the relation between specific psychiatric diagnosis and poverty. This paper provides a first systematic attempt to portray poverty within this group and highlights several urgent needs for research on the economic wellbeing of families with psychiatric diagnosis.

Finally, there is ample evidence that there are vast disparities in employment and educational outcomes across diagnosis status, which would make one anticipate large and persisting disparities in poverty outcomes. Using the MEPS, Baldwin and Marcus show that persons with psychiatric diagnoses have a lower employment rate by 15-percentage points and lower mean hourly wages by 7-percentage points (7). Based on National Comorbidity Survey data, having a psychiatric disorder has been found to be significantly associated with higher dropout rates at every educational milestone (8) and low educational attainment is associated with lower earned income in general (9).

The paper breaks down as follows. First, we describe the methods used to calculate poverty measures, utilize survey data, and construct our analysis. Second, we present poverty profiles based on characteristics of the head of family, the family structure, and by diagnosis. We also present results of multivariate analysis to more closely assess the

association between psychiatric diagnosis and poverty after controlling for a number of other factors. Finally, we discuss our results in the context of the broader poverty literature and outline the limits of the study and potential next steps for research.

Methods

This study compares poverty profiles of families with at least one working age member who has been diagnosed with a psychiatric disorder to families without such a member.[1]

Poverty Measures

We apply three poverty measurement tools that are commonly used in poverty research: poverty headcount, poverty gap, and poverty severity (10, 11). To begin a poverty analysis, one must use some acceptable poverty line to identify families as poor and non-poor. The *poverty headcount* (*H*), or poverty rate, is simply the number of families who fall below the poverty line and are thus identified as poor (*q*) divided by the total number in the population of interest (*n*).

$$H = \frac{q}{n}$$

The depth of poverty (D_i) for a given family *i* is defined as the amount that income for this family (y_i) falls under the poverty line (*z*) as a proportion of the poverty line.

$$D_i = \frac{z - y_i}{z}$$

The *poverty gap* (*PG*) equals the sum of poverty depths for poor families, divided by the total number of poor and non-poor families. This results in the mean depth of the poor across the entire population.

$$PG = \frac{1}{n}\sum_{i=1}^{q} D_i$$

This measure has the potential drawback of undervaluing inequalities across poor families, averaging up the most poor. Poverty severity can be better seen by a measurement that averages the square of the family's depth (11).

$$P_2 = \frac{1}{n}\sum_{i=1}^{q} D_i^2$$

[1] We use the Current Population Survey (CPS) definition of family: "A family is a group of two people or more (one of whom is the householder) related by birth, marriage, or adoption and residing together; all such people (including related subfamily members) are considered as members of one family." In addition, we include single persons who do not live with a relative or a person identified as a "significant other", as MEPS also assigns single persons a family ID value and a family-level weight.

This measure is higher for populations with greater inequality.

For each of the population segments detailed below, we will calculate and compare total income and its composition (*y*), poverty headcount (*H*), gap (*PG*), and gap-squared or severity (P_2) at the family level. We use the 2007 U.S. Census poverty thresholds adjusted for family size, number of children, and age of the family head to identify the poor. Because there is evidence of a significant financial burden associated with out-of-pocket expenditures (OOPs) for persons with psychiatric diagnoses (12) (13), we subtract the amount of OOPs from family income to account for the possibility that catastrophic medical expenses can push one into poverty. In addition, subtracting OOPs from income before comparing income to the poverty line has also been recommended by the National Academy of Sciences (14) and is part of the modern poverty measure under the recently filed Measuring American Poverty Act (2009). Family incomes, net of OOPs, are then compared to relevant U.S. Census poverty thresholds for 2007. A family is considered poor if the family's income net of OOPs falls below the threshold.

Data

This study utilizes data from the family component of the 2007 U.S. Medical Expenditure Panel Survey (MEPS). The MEPS is a nationally representative family survey on health care use, expenditures, payment sources, insurance coverage, income, employment, and education for the non-institutionalized civilian population. The MEPS provides data on a number of income sources (including wages, business/farm income, unemployment compensation, workers' compensation, interest, dividends, pension, social security, and SSI) and on medical OOPs.

The MEPS includes individuals' self-reported health and mental health conditions according to the International Statistical Classification of Diseases, Ninth Edition (ICD-9). Because persons with psychiatric diagnoses form a heterogeneous group, we construct the following five categories based on reported conditions: persons with stress and/or adjustment disorders (ICD-9 = 308, 309), persons with depressive or mood disorders (ICD-9 = 311); persons with anxiety disorders (ICD-9 = 300); persons with any combination of anxiety, mood and stress and/or adjustment disorders; and finally persons with psychotic diagnosis (ICD-9 = 295-298). This last category also includes persons who, in addition to a psychotic diagnosis, have any of the other mental diagnosis.[2]

Data Analytic Procedures

In the first step of the analysis, we identify families that contain at least one working age member (21–61 years) with psychiatric diagnosis.[3] The study sample includes 9,218 families of which 2,186 have members with at least one of the above diagnoses.[4,5] We

[2] We make no differentiation between individuals who report mental conditions for the entire year with those who report for part of the year.
[3] We used 61 years as the cut-off point instead of 64 to avoid including persons who have transitioned to early retirement under the Social Security Administration Old Age program.
[4] We include only observations that were defined as CPS families as of 12/31/2007.

compare families with diagnosis to those without diagnosis across characteristics of the head of family, including sex, age, race, marital status, educational attainment, employment status, and family-size. We provide both average total income and the income source distribution as well as calculate poverty measures for families with each of the specific diagnoses listed above. We use a two-sample t-test to determine whether differences in mean income and poverty measures are statistically significant across diagnosis status.

In the second step of the analysis, we compare families with specific structures. Past research suggests that the structural makeup of a family plays a complex and important role in understanding psychiatric health and poverty. In a recent study, researchers interviewed single mothers facing an upcoming decline in income as they neared the end of TANF eligibility and found that prevalence of major depression was twice than that found in the U.S. female population, while anxiety disorder was 60% higher ((15), p. 254). Women cohabiting with a partner were shown to have a significantly lower prevalence of mood and anxiety disorder compared to women without a partner. Another study followed both single and married inner-city women for two years (16). Researchers found that single mothers had greater financial hardship despite higher full-time employment than their married counterparts. Additionally, single mothers were at a higher risk of having chronic, depressive episode with lack of support being cited as a primary concern. Because MEPS identifies structural relationships within the family, we are able to compare poverty measures across family size, families with children, families with cohabiting partners, and single-parent families. Again, two-sample t-tests are used to analyze poverty measure differences across the diagnosis status of the family.

Many family characteristics are associated with a greater likelihood of having income below the poverty line. Therefore, for our third step, we ran logistic regressions to analyze the association between having adult family members with any psychiatric diagnosis and the probability of a family having income below the poverty threshold, holding constant other important factors (female headed family, ethnicity, martial status, etc). Three such regressions were run in total: on all families in sample, those families with no adult member with any psychiatric diagnosis, and families with adult members with psychiatric diagnoses. The regression using the entire sample of families had sufficient power to include interaction terms reflecting having any diagnosis and ethnicity in an effort to control for differences in income and OOP better explained by ethnicity rather than diagnoses (17). A final logistic regression using just the sample of families with psychiatric diagnoses considered the impact of specific diagnosis on poverty.

Results

Income Sources and Health Expenditures

[5] We have 131 families with two or more members with a psychiatric diagnosis, a group that we treat separately from the other diagnosis groups when we compare income and poverty profiles.

We begin with a description of income sources and health expenditures for both families with and without psychiatric diagnosis, and across specific diagnoses in Table 1. Families with diagnosis have an 8.9% lower average total income compared to families without diagnosis ($58,552 vs. $64,279 respectively, $p<0.01$). Of this total, wage income for families with diagnosis is 12% lower ($50,347 vs. $57,260, $p<0.01$). This difference is offset by higher incomes for the average family with diagnosis from pensions, Social Security, and IRA ($3,543 vs. $2,909 for other families, $p<0.01$) and government transfers ($1,271 vs. $518, $p<0.01$). In addition to having lower incomes on average, families with psychiatric diagnosis have higher OOPs than other families ($1,786 vs. $1,122, $p<0.01$). Differences in the average number of working-age adults in the family across diagnosis status are not statistically significant.

Comparisons across specific diagnosis suggest that families with more severe forms of psychiatric diagnosis have the lowest average total, wage, and investment incomes. Average total income for families with a member with combined anxiety, mood, and adjustment is $53,722, while that of families with psychotic disorder is $33,045, both of which are below the average for all families with diagnosis. Interestingly, families with adjustment disorder, on average, have higher total incomes than families with no diagnosis ($72,835 vs. $64,279). Families with diagnosis for multiple members have the highest average family income of all groups ($77,373), however this is a function of also having the highest average number of working-age adults in the family (2.40 adults). Amongst various diagnosis categories, families with psychotic disorder have the lowest average out-of-pocket medical expenditures at $1,407.

Head of Family Characteristics

Table 2 gives the income and poverty profiles for families containing at least one working-age adult. Prevalence of the combined five psychiatric diagnoses of interest for all families is 23.21% (adjustment, mood, anxiety, combination of the three, and/or psychotic). Median income was $44,828 for families with psychiatric diagnoses compared to $49,311 for families without. The poverty rate was higher for families of members with a diagnosis (17.59 to 12.43, $p<0.01$), as was the poverty gap (9.24 to 5.87, $p<0.01$) and severity measure (8.69 to 4.19, $p<0.01$). The significance is that poor families with diagnosis are further below the poverty line, on average, compared to non-diagnosed families, and poor families with diagnosis suffer a wider distribution of poverty compared to non-diagnosed families. In other words, families with diagnosis have larger percentages facing the most severe forms of poverty.

Profile breakdowns across various characteristics suggest potential factors affecting the severity of poverty. The severity of families with diagnosis is much higher for young families compared to older ones and decreases steadily as the head of family ages, possibly due to increased compensation for experience on the job and to greater asset and wealth accumulation, both associated with age. Among families without diagnoses, poverty is more severe for black- and Hispanic-headed families compared to white families (P_2 equals 6.48, 5.63, and 3.22 respectively). Among families with diagnoses,

the difference across race/ethnic groups is even starker (P_2 equals 13.42, 20.34, and 6.39 for black, Hispanic and white headed families respectively, $p<0.01$).

Severity differences due to lack of education and lack of work also seem to be multiplied by diagnosis status. For families without diagnosis, the P_2 severity difference due to lack of education is 5.89 (9.36 - 3.47), increasing to 16.75 in families with diagnosis (23.49 - 6.74, $p<0.01$). While poverty profiles are similar across diagnosis status for families with a head that is employed either full or part-time, all poverty measures rise for families with an unemployed head. The rise is even more dramatic for families with diagnosis (P_2 equals 23.19 vs. 15.79 for families without diagnosis, $p<0.01$).

To summarize, Table 2 suggests that characteristics of the family head such as being single, lacking a high school degree, being unemployed, and being black or Hispanic are strongly associated with the severity of poverty, and even more strongly so among families with psychiatric diagnosis.

Family Structure

Table 3 describes the poverty profiles of families across diagnosis status for a number of different family structures. The top section compares families across the number of children (none vs. one vs. two or more). The second section compares single-persons to families with multiple members. Finally, we present single-parent families for comparison with other groups.

A comparison of families with and without children living in the dwelling unit shows that families with two or more children have the highest poverty rates but families with diagnosis and no children face the most severe poverty. Across each child category, families with diagnosis have higher poverty rates, gap, and severity than families without diagnosis, but this disparity is statistically significant only for families without children ($p<0.01$ for H, PG, and P_2). Families without children have higher poverty measures than families with one child across diagnosis status. Families with two or more children have higher poverty rates than families with no children, regardless of diagnosis. However, diagnosed families without children show twice the P_2 severity levels compared to families with children. It should be noted that families without children might in fact have children living outside the dwelling unit, under the care of others.[6]

In the middle panel of Table 3, results suggest that families with diagnosis have higher poverty rates (12.08 vs. 10.35), gap (5.65 vs. 4.77), and severity (4.18 vs. 3.27) compared to families without diagnosis ($p<0.10$ for each measure). We also find that single persons face more severe poverty than families, especially if the person is diagnosed with psychiatric condition. The poverty gap for single persons with diagnosis doubles the gap for persons without diagnosis (16.53 vs. 8.03 respectively, $p<0.01$), and poverty severity nearly triples that of persons without diagnosis (17.84 vs. 6.01 respectively, $p<0.01$). All

[6] Children living outside the dwelling unit (either away in college or in the care of others) are not considered part of the reporting family. Thus, a single person or a "family without children" in this study may have a child living outside the DU, in the care of others.

measures of poverty are higher for single persons than families, across poverty status. For example, P_2 severity for single persons with diagnosis quadruples the same measure for families with diagnosis (17.84 vs. 4.18, respectively).

Single-parent families show high poverty rates relative to other family structures, with 25.07% of non-diagnosed and 30.60% of diagnosed families living under the poverty line. Single-parent families with diagnosis have higher poverty rate, gap, and severity than single-parent families with no diagnosis ($p<0.01$ for each measure). Comparing single-parent families to other families with children (either one child or two or more), we find higher poverty rate, gap, and severity for single-parent families across diagnosis status. Restricting comparisons to families without diagnosis, we find that single-parent families face higher poverty rates, gap, and severity than single persons (P_2 equals 8.89 vs. 6.01 respectively). The opposite is true for families with diagnosis, as single-parent families with diagnosis have lower poverty values compared to single persons with diagnosis (P_2 equals 10.86 vs. 17.84, respectively). Overall, these findings suggest that single persons and single-parent families face higher poverty severity than other families, a result that is even more pronounced when combined with psychiatric diagnosis.

Specific Diagnosis

Table 4 shows poverty profiles for multi-member families, single persons, and all families of working-age adults across specific psychiatric diagnosis. Poverty measures are higher for single-person families compared to multi-member families across every diagnosis. For mood disorders, the poverty rate of single persons is triple and poverty severity is 6 times that of multi-member families. For families with psychotic disorder, poverty gap and severity of single persons are triple that of multi-member families. Additionally, 30.12% of single persons with mood disorder and 46.26% with psychotic disorder live under the poverty line.

In addition, comparing these results of Table 4 to those on all households without diagnosis in Table 2, families with adjustment or anxiety disorder have poverty indicators that are close to those of families without a diagnosis. In contrast, families with mood or psychotic disorders have poverty severity two to three times that of families without diagnosis ($p<0.01$). Overall, we find that the association between poverty and psychiatric diagnosis varies across diagnostic groups. A large and statistically significant correlation was found between poverty severity, on the one hand, and mood or psychotic disorder, on the other.

Multivariate Analysis

Multivariate analysis reported in Table 5 confirms results from the descriptive analysis. We implement a logistic regression to predict the probability of being poor based on the characteristics listed above. The coefficients represent odds ratios. We first study the entire sample. The odds of being poor for families with a psychiatric diagnosis are 1.76 times the odds of other families being poor ($p<0.01$). Families where the head has no

high school degree were 4.10 times more likely to be poor ($p<0.01$). Additionally, a single person is 4.24 times more likely to be poor than a multi-member family ($p<0.01$).

Because characteristics could have varying effects on the odds of being poor across families with and without diagnosis, we also run the regression separately for each subsample. For families with and without diagnosis, a number of the variables have coefficients that are statistically significant: being black, being single, lacking high school education, being unemployed, having children, and living in a metropolitan area. For these variables, the odds ratios are generally similar in both the subsamples of families with and without diagnoses. One exception is the variable ‘single person. The odds of being poor for a single person is 5.86 times that of multi-member families, in the sub-sample of diagnosis families, and 3.69 times that of non-diagnosed families ($p<0.01$ for each).

Additionally, within the subsample of families with diagnoses, we include variables for adjustment, anxiety (alone), anxiety combined with mood or adjustment, psychotic disorder (including combination with another diagnosis), and families with multiple members with psychiatric diagnosis. The coefficients represent the odds of being poor compared to members who are diagnosed with mood disorder alone. The odds of being poor for families with psychotic diagnosis are 2.13 times higher than that of families with mood disorder ($p<0.01$). Families with adjustment disorder are less likely to be poor, as are families with multiple members with diagnoses, compared to families with mood disorder (55% and 47%, respectively: $p<0.05$).

Discussion

Our findings suggest that families with a psychiatric diagnosis have significantly higher rates of poverty compared to families without such a diagnosis. This result is consistent with findings from earlier studies around income and poverty (1, 4) and on medical expenditures (13). Not only are poverty rates higher, but also poverty gaps and severity are higher for diagnosed families. In addition, the odds of being poor for families with a psychiatric diagnosis are 1.76 times the odds of other families being poor, after controlling for other relevant variables ($p<0.01$). Finally, we find that the association between poverty and psychiatric diagnosis varies across diagnostic groups: there is a strong association between poverty and mood or psychotic disorder. In contrast, families with adjustment or anxiety disorder do not show poverty profiles that are significantly different from families without a diagnosis.

This study makes two noteworthy contributions. First, we are able to identify groups who are the most disadvantaged according to severity of income poverty among families with diagnoses. These include families whose head of family has no high school education, who has been unemployed for the entire year, who is Black or Hispanic, or who is non-married. While these characteristics are related to poverty for the overall population, they correlate to heightened severity when combined with psychiatric diagnosis. In addition, this study shows that families with more severe psychiatric diagnoses, including mood

and psychotic disorders are face even greater severe poverty. Finally, the number of members in one's family has a significant correlation with poverty severity, with multi-member families facing less severity than single persons. This difference in severity is much greater for single persons with a psychiatric diagnosis and single-parent families with diagnosis of the family head. These results are consistent with those from the literature on mental health disparities and unemployment (1, 7), education (4, 8), race (18), and single parenting (15, 16).

Secondly, this study has several policy implications. While poverty reduction programs are in place to reduce poverty among families, in general, and among families with psychiatric diagnosis, in particular, results from this study suggest that these programs have not reduced the poverty levels of families with diagnosis to those of other families. Existing poverty reduction programs might not be sufficient to reach this population and further research and program evaluations are needed in this area. Additionally, this study points to a need to break the association between psychiatric diagnosis and poverty, perhaps with mental health policies that address poverty. Given the additional association between limited education, non-employment, and a psychiatric diagnosis, on the one hand, and severe poverty on the other, more holistic mental health policies, including recovery programs should be explored. In particular, programs that cover the social context of recovery in areas such as facilitating access to employment or education seem promising.

The analysis above has several limitations. The MEPS does not cover the institutionalized and congregate housing populations with psychiatric diagnoses, nor the homeless, and is therefore not representative of the entire working age population with psychiatric diagnoses. Thus, since our study omits groups with high concentrations of persons with psychiatric disorders who are likely to have low incomes, our estimates are likely to be low compared to a sample that would include all working age adults.

Our study also does not attempt to answer the question of what causes poverty, limiting the analysis to highlight family and individual characteristics that are statistically associated to poverty. The study does not address a possible two-way, causal relationship between diagnosis and poverty, with our regression results supporting only a strong association between the two. Conceptually, poverty and psychiatric diagnosis can be thought of as having a two-way relationship. Focusing on depression, Mirowsky and Ross outline the causal relationship between diagnosis, income, and poverty in two models (19). The "social cause" model begins with the assertion that lower income increases economic hardship, which in turn increases feelings of powerlessness and ultimately depression. The "social selection" model asserts that depression leads to decreased income, leading to economic hardship. Although the authors find some evidence that stresses low income as a causal force of depression, a complex, circular relationship cannot be ruled out especially.

Finally, a growing body of research broadens the scope of poverty beyond income, the focus of this paper. Poverty can be understood as a deprivation of well being, more precisely as a deprivation of practical opportunities (e.g., the opportunity to be educated

or to have decent work). This has come about from conceptual work, in particular A.K. Sen's capability approach (20, 21). Despite this recent movement towards more multi-dimensional approaches to measuring poverty, we measure poverty only through the proxy of income and use traditional economics tools to measure poverty. More research is needed to assess the poverty status of families with psychiatric diagnoses using dimensions other than income.

This paper has only shown the tip of the iceberg on psychiatric diagnosis and poverty. Our findings point to the need for additional research in a number of areas: trends in poverty for these groups over time (potentially by utilizing MEPS from 1996); mobility and persistence of poverty for this group; the effects of cash transfers and other benefit programs that reach persons with psychiatric diagnosis; and the association of diagnosis to other, non-monetary dimensions of poverty, such as a lack of social integration.

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Table 1: Breakdown of Family Income by Diagnosis of a Working-age Member (Mean Value in Dollars)

	No Diagnosis	Psychiatric Diagnosis		Adjustment	Mood	Anxiety	Anxiety w/ Mood or Adj	Psychotic	Multi-member Diagnosis
Total Income	64,279	58,552	***	72,835	56,746	62,202	53,722	33,045	77,373
	(1012.25)	*(1241.87)*		*(1597.43)*	*(1683.69)*	*(1866.35)*	*(1971.52)*	*(1279.57)*	*(1925.91)*
Wages	57,260	50,347	***	65,538	48,065	54,923	45,983	24,368	66,812
	(915.84)	*(1170.33)*		*(1522.72)*	*(1607.05)*	*(1662.05)*	*(2138.03)*	*(1419.03)*	*(1848.46)*
Investment	2,879	2,216	*	2,349	2,247	2,831	1,891	725	2,184
	(173.64)	*(239.62)*		*(395.10)*	*(433.05)*	*(373.38)*	*(440.78)*	*(67.76)*	*(62.06)*
Pension, Social Security, IRA	2,909	3,543	***	2,947	4,079	2,573	2,824	4,107	5,469
	(130.78)	*(216.34)*		*(331.09)*	*(318.00)*	*(320.09)*	*(279.73)*	*(369.93)*	*(118.40)*
Government Transfers	518	1,271	***	680	1,149	908	1,575	2,681	1,894
	(29.07)	*(90.02)*		*(92.70)*	*(123.40)*	*(103.37)*	*(223.22)*	*(162.63)*	*(83.96)*
Other	713	1,176	*	1,320	1,205	968	1,450	1,163	1,014
	(63.00)	*(130.70)*		*(94.08)*	*(150.18)*	*(212.04)*	*(227.09)*	*(194.69)*	*(23.03)*
Health Expenditure (OOPs)	1,122	1,786	***	1,888	1,692	1,827	1,815	1,407	2,547
	(32.08)	*(64.64)*		*(72.25)*	*(86.23)*	*(135.34)*	*(90.98)*	*(65.63)*	*(69.77)*
Working-age Adults	1.80	1.81	*	1.79	1.83	1.84	1.60	1.55	2.40
	(0.01)	*(0.02)*		*(0.07)*	*(0.03)*	*(0.04)*	*(0.05)*	*(0.07)*	*(0.07)*
Observations	7,032	2,186		248	898	460	258	191	131

Notes:
- Government Transfers include: Veteran's Income, SSI, Public Assistance, and Unemployment Compensation.
- All estimates use MEPS household weighting and account for complex stratification.
- Standard Deviations in parenthesis.
- T-test of the null hypothesis that mean values are equal to "No Diagnosis": * significant at 10%; ** significant at 5%; *** significant at 1%

Table 2: Poverty Measures for for US Families by Family Head Characteristics and Psychiatric Diagnosis Status of Working Age Adults in Family

			Psychiatric Diagnosis							No Diagnosis			
		Obs	Prevalence (%)	Median Income ($)	Poverty Rate (H)		Poverty Gap (PG)		Poverty Severity (P_2)		Median Income ($)	Poverty Rate (H)	Poverty Gap (PG)	Poverty Severity (P_2)
All Households		9,218	23.21	44,828	17.59	***	9.24	***	8.69	***	49,311	12.43	5.87	4.19
	Metropolitan area	7,755	22.79	46,508	16.49	***	9.00	***	8.83	***	50,658	11.99	5.52	3.95
	Non-metro area	1,463	25.50	35,744	23.05	***	10.41	*	7.97	*	41,096	14.95	7.89	5.61
Family Head Characteristics														
Sex														
	Male	4,220	20.40	50,810	13.76	***	7.84	***	9.61	***	50,665	9.92	4.67	3.47
	Female	4,998	26.01	39,995	20.60	***	10.34	***	7.97	***	47,515	15.13	7.16	4.97
Age[a]														
	21-30	1,745	17.49	25,109	24.10	**	13.35	***	15.63	**	30,000	18.67	8.65	5.87
	31-40	2,239	21.87	43,964	19.30	***	9.61	***	7.35	***	51,366	11.53	5.39	3.77
	41-50	2,363	25.93	52,121	16.99	***	8.41	***	6.86	***	60,000	9.41	4.46	3.46
	51-61	2,285	28.35	50,487	13.72	*	7.75	**	8.03	***	59,454	10.98	5.33	3.89
	Over 61	551	17.14	37,073	14.90	*	7.06	-	4.64	-	57,785	8.48	4.22	3.13
Race/Ethnicity														
	Non-Hispanic White	4,904	26.00	48,856	14.31	***	7.32	***	6.39	***	56,590	8.55	4.30	3.22
	Non-Hispanic Black	1,633	16.45	25,290	34.15	***	17.93	***	13.42	***	34,379	20.99	9.62	6.48
	Hispanic, Any Race	2,044	18.32	34,275	26.19	**	14.69	***	20.34	***	34,280	20.98	8.55	5.63
	Other Races	637	17.68	48,400	18.71	-	10.79	-	9.57	-	56,997	13.66	7.46	5.75
Marital Status														
	Married	4,824	23.53	69,929	6.58	-	2.82	-	2.44	-	73,049	6.06	2.59	1.70
	Not Married	4,394	22.89	24,920	28.70	***	15.71	***	14.99	***	31,643	18.62	9.07	6.62
Educational Attainment[b]														
	Less than High School	1,709	22.43	20,248	40.87	***	20.92	***	23.49	***	25,669	32.07	13.98	9.36
	High School or Higher	7,475	23.31	48,687	14.52	***	7.70	***	6.74	***	53,658	9.68	4.73	3.47
Employment Status (Entire Year)[b]														
	Employed fill time	6,189	19.89	57,618	5.55	*	2.01	*	1.22	*	55,293	6.00	2.01	1.19
	Some work	1,183	27.97	24,950	30.55	-	14.89	-	16.84	-	25,000	32.25	15.71	10.47
	No Work	1,798	34.80	21,602	40.20	***	24.43	***	23.19	***	29,976	31.94	19.29	15.79

Notes:
- Poverty Lines from 2007 U.S. Census Bureau Thresholds, by family size and number of children.
- All estimates use MEPS household weighting and account for complex stratification.
- T-test of the null hypothesis that mean values are equal to "No Diagnosis": * significant at 10%; ** significant at 5%; *** significant at 1%

[a] Age Category of <= 21 is withheld due to low observations.
[b] Total observations for Education and Employment lower than 9218 due to missing data.

Table 4: Poverty Measures for for Single- and Multi-Member US Families by Specific Psychiatric Diagnosis of Working Age Member

	Obs	Prevalence (%)	Median Income ($)	Poverty Rate (H)		Poverty Gap (PG)		Poverty Severity (P_2)	
Single-persons (2384 Obs)									
Adjustment	66	2.41	31,676	16.04		8.01		7.01	
Mood	236	9.13	22,012	30.12		19.80		24.55	
Anxiety	105	4.73	30,758	23.10		12.54		15.29	
Anxiety w/ Mood or Adj	93	3.59	25,697	27.05		11.25		7.38	
Psychotic	79	2.93	12,818	46.26		26.24		22.77	
Multi-member Families (6834 Obs)									
Adjustment	182	2.52	69,495	11.12		6.32		5.70	
Mood	662	9.15	55,861	12.28		5.77		4.50	
Anxiety	355	5.77	59,456	11.49		4.96		3.04	
Anxiety w/ Mood or Adj	165	2.33	55,230	12.73		6.32		4.53	
Psychotic	112	1.56	32,812	22.87		9.83		7.06	
Multiple members with diagnosis	131	2.09	69,539	5.30		2.34		1.52	
All Families (9218 Obs)[a]									
Adjustment	248	2.54	54675	12.72	-	6.87	-	6.13	-
Mood	898	10.06	44303	18.27	***	10.48	***	11.23	**
Anxiety	460	5.73	51231	14.90	-	7.19	-	6.63	-
Anxiety w/ Mood or Adj	258	2.83	36464	19.01	**	8.48	*	5.78	-
Psychotic	191	2.06	22325	34.28	***	17.84	***	14.72	***
Multiple members with diagnosis	131	1.41	69539	5.30	***	2.34	***	1.52	***
Any of the Above Diagnoses (from Table 2)	2,186	23.21	44,828	17.59	***	9.24	***	8.69	***
No Diagnosis (from Table)	7,032	-	49,311	12.43		5.87		4.19	

Notes:

- Poverty Lines from 2007 U.S. Census Bureau Thresholds, by family size and number of children.
- All estimates use MEPS household weighting and account for complex stratification.
- T-test of the null hypothesis that mean values are equal to "No Diagnosis": * significant at 10%; ** significant at 5%; *** significant at 1%

[a] T-tests performed on "All Families" sample only.

Table 5: Predictors of Poverty for US Families by Psychiatric Diagnosis Status of Working Age Adults in Family

Subsample:	All Families	No Diagnosis	Diagnosis	Specific Diagnosis
Any Psychiatric Diagnosis of Adult Member	1.76			
	*(0.186)***			
Family Head Characteristics				
Female	1.72	1.77	1.52	1.53
	*(0.134)***	*(0.163)***	*(0.222)***	*(0.226)***
Under 30	1.67	1.77	1.47	1.46
	*(0.152)***	*(0.183)***	*(0.287)**	*(0.29)*
Non-Hispanic Black	2.33	2.29	2.65	2.75
	*(0.236)***	*(0.232)***	*(0.514)***	*(0.553)***
Hispanic, Any Race	1.57	1.52	1.54	1.67
	*(0.187)***	*(0.188)***	*(0.327)**	*(0.347)**
Single person	4.24	3.69	5.86	5.39
	*(0.402)***	*(0.419)***	*(1.037)***	*(0.968)***
No Highschool	4.10	4.19	3.92	3.76
	*(0.378)***	*(0.461)***	*(0.648)***	*(0.629)***
Number of Children	1.62	1.62	1.60	1.61
	*(0.051)***	*(0.059)***	*(0.103)***	*(0.105)***
Lives in Metropolitan Area	0.60	0.63	0.52	0.52
	*(0.059)***	*(0.076)***	*(0.087)***	*(0.087)***
Sibling to Head in Family	1.03	0.95	1.23	1.22
	-0.25	*-0.249*	*(0.68)*	*(0.69)*
Parent to Head in Family	1.07	1.19	0.73	0.67
	-0.214	*(0.27)*	*-0.288*	*-0.266*
Interaction: Psychiatric Diagnosis and Black	1.13			
	(0.24)			
Interaction: Psychiatric Diagnosis and Hispani	0.90			
	(0.20)			
Specific Diagnosis of Adult in Family (Mood is Omitted)				
Adjustment				0.551
				*(0.139)**
Anxiety				0.93
				(0.19)
Anxiety w/ Mood or Adj				0.902
				(0.20)
Psychotic				2.13
				*(0.472)***
Multiple members with diagnosis				0.47
				(0.174)*
Observations[a]	9184	7006	2178	2178
Log-Likelihood	-3137	-2271.44	-861.39	-845.82
Chi-Square	813.98	599.1	224.17	228.57
Pseudo-R^2	0.14	0.14	0.15	0.17

Notes:

- Logistic Regression, Dependent Variable: Below Poverty Line
- Odds ratios are shown. Robust standard errors in parentheses

* significant at 5%; ** significant at 1%

[a] Total observations is lower than 9218 due to missing data for Education.