



THE MONTEFIORE COMMUNITY  
CHILDREN'S PROJECT:  
A CONTROLLED STUDY OF  
COGNITIVE AND EMOTIONAL  
PROBLEMS OF HOMELESS  
MOTHERS AND CHILDREN

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**ABSTRACT**

*Objectives.* This study compares the prevalence of emotional, academic, and cognitive impairment in children and mothers living in the community with those living in shelters for the homeless.

*Method.* In New York City, 82 homeless mothers and their 102 children, aged 6 to 11, recruited from family shelters were compared to 115 nonhomeless mothers with 176 children recruited from classmates of the homeless children. Assessments included standardized tests and interviews.

*Results.* Mothers in shelters for the homeless showed higher rates of depression and anxiety than did nonhomeless mothers. Boys in homeless shelters showed higher rates of serious emotional and behavioral problems. Both boys and girls in homeless shelters showed more academic problems than did nonhomeless children.

*Conclusion.* Study findings suggest a need among homeless children for special attention to academic problems that are not attributable to intellectual deficits in either children or their mothers. Although high rates of emotional and behavioral problems characterized poor children living in both settings, boys in shelters for the homeless may be particularly in need of professional attention.

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## BACKGROUND

Homelessness is one of the great social crises of the US.<sup>1</sup> The rise in the proportion of the homeless population of families with children is of particular concern,<sup>2-4</sup> perhaps even more so as the movement to limit support to families passes into law. Previous studies of homeless children have demonstrated poor preventive health care<sup>5</sup>; high rates of admissions to hospitals<sup>6</sup>; child abuse and neglect<sup>7</sup>; untreated acute and chronic illness<sup>8,9</sup>; developmental delays<sup>10,11</sup>; and greater emotional, behavioral, and learning difficulties<sup>12-14</sup> than children in the general population. Information on the extent to which these problems may be taken into account by demographic characteristics of homeless families, whether problems in the children are attributable to problems in mothers, and whether the prevalence of problems of various kinds exceeds those of other poor families is only beginning to accumulate. Fragmented and uncoordinated preventive and intervention strategies are carried out by both government and private agencies concerned with homeless families.

Homeless families differ in a number of respects from other poor families,<sup>15-17</sup> including the incidence of more single mothers, younger maternal age, and welfare support, which may account particularly for a higher prevalence of emotional, behavioral, or intellectual problems in these families.<sup>18</sup> If these variables should account for problems in the children, the implication is that mechanisms outside the homeless setting are at work and should be the primary focus for prevention efforts that target the problems of homeless children. Such mechanisms may be shared by homeless and other poor families.<sup>19,20</sup> Children in homeless families may also be vulnerable to problems reflected in their mothers,<sup>21,22</sup> for whom comprised intellectual and emotional functioning may lead to impaired parenting.<sup>23,24</sup> Again, if maternal variables account for problems in the offspring, mothers and children are the appropriate primary target for intervention.

Thus, the current study assessed cognitive and emotional function for both homeless mothers and children in comparison to other poor families. This report focuses on the rates of problems of sufficient severity clearly to warrant attention and investigates whether demographic or maternal variables account for the elevation of problem rates in homeless children relative to other poor children.

## METHODS

### SAMPLE

Homeless families were recruited from three city-run family shelters located in Manhattan and the Bronx in New York City. Sampled families lived in one

dormitory-style shelter in which several families shared sleeping areas, bathrooms, and dining areas or in one of two shelters in which each family had a single room and used congregate bathrooms and dining. Although dormitory-style shelters were intended to be very short term, length of stay in the two shelter types was similar because of a shortage of placement options.<sup>25</sup> Selection of shelters for inclusion in the study was based on willingness of shelter administration and the local school officials to permit recruitment. All families present in these shelters between August 1990 and August 1992 were approached for participation if they (1) included one or more children between the ages of 6 and 11, (2) had resided at the shelter for at least 15 days, and (3) had been homeless for at least 30 days. Approximately 90% of eligible families, including 82 mothers with 102 children, agreed to participate in the study.

In each homeless family, one child was selected at random from those attending a local school. A list of all children attending the same class was obtained from the school and stratified by gender and ethnicity. The family of a randomly selected nonhomeless child of the same gender and ethnicity was approached and invited to participate in the study, which was described as investigating problems in homeless families. About 80% agreed to participate. Although the original study design called for two nonhomeless families for each homeless family, the attempt to match for ethnicity limited the available families. In all, 115 nonhomeless families with 178 children in the study age range participated in the study. Mothers were paid for their participation, and children were given a small toy.

#### **PROCEDURES**

Study assessments of mothers and children were conducted in rooms provided in the three New York City public schools that served shelter children. Assessments were carried out by four trained lay college graduate interviewers; two were bilingual. Assessments of mothers and children usually were carried out simultaneously, but separately, by two interviewers and took an average of 90 minutes. Respondents chose Spanish or English as their preferred language for the assessment.

#### **MEASURES**

Maternal interviews included demographics and housing history. Maternal intellectual functioning was assessed with the Raven's Standard Progressive Matrices,<sup>26-28</sup> a nonverbal instrument that is thought to be relatively free of cultural bias, and the Peabody Picture Vocabulary Test—Revised,<sup>29</sup> a measure that requires the matching of words and pictures, but does not require reading skill. Maternal

emotional symptoms were assessed by responses to the Taylor Manifest Anxiety Scale<sup>30</sup> and the Beck Depression Inventory.<sup>31</sup> The mother's assessment of the children's symptoms and functional level was provided by the Child Behavior Checklist Parent Form.<sup>32</sup>

Child intellectual function was assessed with the Raven's Progressive Matrices and the Peabody Picture Vocabulary Test. Academic achievement level was measured with the Wide Range Achievement Test<sup>33</sup> of spelling, arithmetic, and reading subtests, given in English for all children.

Children's self-reports of emotional and behavioral problems were measured with the Children's Manifest Anxiety Scale<sup>34</sup> and the Children's Depression Inventory.<sup>35-37</sup> All self-report measures were read to the child so that reading ability was not required. Except for the Peabody, study instruments were not available in Spanish and were translated by study staff. Translations into Spanish were translated back into English to verify accuracy of Spanish translations. Each of the measures employed has been used widely and has shown good reliability and concurrent validity in studies of clinical and other populations.

#### **CASE DEFINITION**

To define serious problems, we used published norms for each instrument to identify levels of responses that warranted special assistance or treatment. In the area of cognition, serious problems were defined for those whose age-adjusted standard scores on the Raven's Progressive Matrices and on the Peabody Picture Vocabulary Test were in the range defined as borderline or retarded function.

In the area of academic achievement, children were defined as having serious problems when they lagged in any two of the three academic areas in the Wide Range Achievement Test. Estimates of the seriousness of emotional and behavioral problems were based on the cutoff for clinical cases established for the Child Behavior Checklist, the Beck Depression Inventory, and the Taylor Manifest Anxiety Scale.

#### **STATISTICAL ANALYSIS**

Statistical analyses reported here do not discriminate type of shelter because study findings did not differ between shelters and because the homeless experience included so many elements common to both. Because the method of matching served only to keep the age of the children used in the classroom match similar, but did not control for the number or age of the siblings also included in the study, the data were analyzed as two groups rather than as matched pairs with statistical adjustment for age, gender, ethnicity, and socioeconomic status. The binary outcome variables required treatment by logistic regression; therefore,

children were treated as independent observations, ignoring the correlation between members of the same family. Examination of the subgroup of 197 children who were the basis for the sample matching gave essentially the same findings, but with reduced statistical power (larger standard errors). Preliminary analyses demonstrated significant differences by sex of child, indicating that combined analyses were inappropriate statistically.

## STUDY FINDINGS

### DEMOGRAPHIC DATA

Description of the demographic differences between the groups may be seen in Table I. Compared to the nonhomeless mothers, homeless mothers were significantly younger, poorer, less educated, more likely to be living with children alone, and more likely to be unemployed.

Homeless children were significantly younger than comparable nonhomeless children in general and were more likely to be African-American. Differences occurred between the two groups in spite of our efforts at matching. The siblings of the homeless children were younger than those of the nonhomeless. The African-American families who were homeless were similar to Hispanic families in the schools they attended. Nonhomeless families lived predominantly in privately owned rental units.

### COGNITIVE AND EMOTIONAL PROBLEMS IN MOTHERS

Homeless mothers were not more likely than nonhomeless mothers to show cognitive problems, as reflected in the matrices or picture vocabulary measures (Table II). Covariates that differed between groups, including maternal age,

**TABLE I** Demographic Differences Between Household and Homeless Families

	Homeless	Community
Maternal age, mean (SD)	30.2 (5.9) years	34.2 (8.5) years
Child age, mean (SD)	7.3 (1.5) years	8.3 (1.5) years
Hispanic, %	48	66
African-American, %	52	34
Social class V, %	82	57
Maternal high school diploma, %	43	61
Currently married, %	21	32
AFDC or other public support, %	97	65
Currently employed, %	7	25
Study children female, %	45	53

AFDC, Aid to Families with Development Children; SD, standard deviation.

**TABLE II** Rates of Cognitive and Emotional Problems in Mothers

Measures	Homeless Mothers, N = 82	Housed Mothers, N = 115	Odds Ratio (CL)*
Cognitive impairment			
Matrices	34	38	.82 (0.43–1.57)
Vocabulary	45	17	1.44 (0.79–2.60)
Either	75	69	1.00 (0.53–1.89)
Emotional problems			
Anxiety	40	19	2.85 (1.39–5.83)
Depression	38	11	3.64 (1.63–8.14)
Either	49	21	3.43 (1.67–7.04)

\*95% confidence limit.

maternal high school graduation, and ethnicity, did not have other major effects on cognitive function. However, homeless mothers were much more likely to show clinical levels of depression, anxiety, or both. In this analysis, the adjusted odds ratio (OR) gives the odds of being in the impaired groups for the homeless divided by the odds of being in the impaired groups for those in the community. The 95% confidence limit of this number indicates the likely range of the population value. If the units include 1.00, which would indicate equal odds, the OR is not statistically significant at the .05 level. After adjustment for covariates, the odds of these serious problems in homeless mothers were 2.85 to 3.64 times as large as in the nonhomeless sample.

#### **COGNITIVE AND EMOTIONAL PROBLEMS IN CHILDREN**

Because of the different proportions of boys and girls in the two housing groups and because of the likelihood that effects of homelessness may not be equivalent for boys and girls, effects were examined within sex groups. As may be seen in Table III, all groups of children performed fairly close to the norms on the progressive matrices, with about 13% functioning in the borderline or lower range. However, on the vocabulary-based test, both homeless and nonhomeless children, as a whole, did very poorly, with over 60% and 50%, respectively, functioning in the case range. As expected, certain characteristics of mothers, particularly young age, low cognitive function, and failure to graduate from high school, were related to poor function in offspring. Therefore, these variables were used as controls in logistics regression analysis testing of the effects of homelessness on the offspring. When these controls were included in the equations, none of the differences between homeless and nonhomeless children

**TABLE III** Rates of Cognitive, Achievement, and Emotional Problems in Children

Measures	Homeless Children, N = 102			Housed Children, N = 178			Homeless Effect, Male (CL), OR*	Homeless Effect, Female (CL), OR
	Male	Female	Total	Male	Female	Total		
Cognitive impairment								
Matrices measure	16	10	13	12	12	12	1.81 (0.59–5.6)	.55 (0.12–2.52)
Vocabulary test	57	65	61	56	47	51	.75 (0.30–1.88)	2.27 (0.90–5.7)
Either	64	65	65	61	50	55	1.13 (0.44–2.89)	1.36 (0.51–3.67)
Academic								
Arithmetic†	44	32	39	18	11	14	1.62 (0.64–4.16)	1.90 (1.15–3.14)
Spelling	59	43	52	35	32	29	2.11 (0.88–5.09)	1.73 (1.12–2.66)
Reading	50	46	48	28	25	27	1.89 (0.78–4.55)	1.76 (1.15–2.70)
Two or more subjects	54	41	48	30	17	24	1.88 (0.77–4.65)	2.08 (1.32–3.28)
CBCL internalizing	30	11	22	8	6	7	3.19 (0.99–10.29)	1.07 (0.56–2.04)
CBCL externalizing	34	17	26	12	14	13	2.94 (1.07–8.06)	.92 (0.56–1.54)
CBCL total	34	13	24	12	12	12	3.11 (1.10–8.84)	.80 (0.45–1.40)
Child report anxiety	33	20	27	14	26	21	3.70 (1.14–9.68)	.87 (0.55–1.38)
Child report depression	13	14	13	13	12	13	.87 (0.26–2.91)	1.1 (0.57–1.78)
Any child report	38	26	32	22	28	25	2.27 (0.96–5.41)	1.00 (0.65–1.52)

CBCL, Child Behavior Checklist; CL, confidence limit; OR, odds ratio.

\*Net of age, ethnicity, maternal education, and parallel maternal variables; see text.

†The N for these analyses is 263 because grade could not be determined for the youngest children in the sample.

reached conventional levels of statistical significance, although, as can be seen, there was a trend toward more cognitive impairment in homeless girls.

The nonhomeless children functioned much closer to norms in the academic domain, for which an overall rate of 24% of children performed one or more years behind grade level. Thus, despite their similarity in cognitive functioning, achievement differences between the two groups were striking, with about half of the homeless children falling well below the norms in each academic area, in contrast to approximately a quarter of the nonhomeless children, depending on the academic area. These differences were comparable in boys and girls, although differences between the groups of boys did not reach conventional levels of significance. The ORs were of comparable size to those of girls. The combined sex groups showed a consistent difference between nonhomeless and homeless children, and the sex interaction was not significant.

Rates of child behavioral problems reported in the maternal interview were elevated particularly in the homeless group, with one-quarter testing in the abnormal range. The nonhomeless boys and girls were comparable to the norms. As can be seen, the major differences come from the comparisons of the male

samples, for which the adjusted ORs after adjustment for covariates, including maternal emotional distress, showed that the odds of clinical-level problems in homeless boys were about three times those prevailing for nonhomeless boys. Self-reported data on anxiety were completely consistent with these findings; again, boys showed very elevated rates when they were homeless. On the other hand, both groups showed rates of self-reported depression that were not much larger than norms, and the overall differences in rates of any self-reported emotional disorder are consequently somewhat diluted.

We examined relationships among the rates of problems in the different areas. The rates for each problem showed slight, but significant, differences between the two groups. No particular problem (such as difficulties in achievement) fully accounted for the elevation in homeless children of other problems (such as anxiety).

#### DISCUSSION

As has been shown in other studies, homeless mothers were more often seriously depressed and anxious than were nonhomeless mothers. Depression in homeless mothers may be due to a combination of factors, including stress in coping with daily requirements for the family, frequent unpredictable upheaval, and loss of control over the means to pursue personal and parenting goals. As noted, the greater number of boys among the offspring suggests that some daughters were housed elsewhere. The separation from children among homeless mothers is very common<sup>22</sup> and may be a major cause of depression. In addition, among the poor, persons who are more prone to emotional difficulties are less likely to be able to muster the resources required to prevent homelessness.<sup>16</sup> Thus, some group differences in maternal problems may reflect the greater vulnerability of the cognitively or emotionally impaired to homelessness. While there is a possibility that genetics may play a role in emotional and behavioral problems, this factor was not considered in this study.

Emotional and behavioral problems in homeless boys were elevated, while the findings in the other groups were comparable to norms. Other studies have also shown that homeless children score higher in total behavior problems than do nonhomeless poor children. Here, we have also shown that this effect is not limited to maternal report. As we have noted, the sex ratio in the homeless setting was higher for boys because many families are concerned about the safety of girls in these settings. Thus, they tend to call on other relatives to care for daughters whenever possible. Our data, however, suggest that, with regard to emotional problems, it is the boys who are particularly vulnerable, with rates



of problems that are about three times those of nonhomeless boys, even after considering differences in other risk factors, such as maternal emotional problems. This elevation appeared both on maternal report and on independent child report. These data are consistent with other evidence that school-age boys are more vulnerable than age-matched girls to a variety of physical and emotional insults, including, for example, parental divorce.<sup>38</sup>

Although most homeless children are enrolled in school, their attendance rates are poor.<sup>39</sup> As a consequence, other studies report that homeless children are more likely to repeat a grade. A review of the reading and mathematics scores of students living in temporary housing in New York City compared to scores obtained systemwide showed lower scores for homeless students.<sup>39</sup> In our study, scores on the Wide Range Achievement Test disclosed significant differences between the two groups, with homeless children more severely behind on reading, spelling, and mathematics in relation to comparable nonhomeless groups. These findings provide a strong indication that there is a need to support an environment for study and learning in facilities for the homeless. It has also been well recognized that frequent changes of schools contribute to the education problems of homeless children.<sup>13,39</sup> Yet, homeless families are assigned frequently to shelters in neighborhoods away from their children's schools; this interrupts schooling for the children. Rates of notable problems in cognitive function were high, but comparable between homeless mothers and nonhomeless poor mothers and also comparable between homeless children and nonhomeless poor children when demographic differences between the groups were taken into account. However, data were consistent, with a small excess in poor cognitive function, among homeless girls. This finding is in contrast to previous findings that suggest that homeless mothers were more likely to talk with their preschool girls than with boys,<sup>17</sup> which, if generally true, would lead to the prediction of less cognitive impairment for girls than for boys.

The current study is limited in several ways. In retrospect, it is clear that more detailed school histories would have been useful for determining whether frequent changes of schools or poor attendance accounted for the academic problems of these children. Efforts to obtain this information from schools were made, but the data usually obtained represented far too small a fraction of the children to be useful. Teachers told us that they themselves did not have this information.

The study was also not entirely successful in matching groups on ethnicity. Homeless families in these shelters were predominantly African-American, whereas the local school populations were predominantly Hispanic. These ethnic differ-

ences may have produced problems for children in the schools, for example, by increasing the likelihood that they would be labeled as coming from the shelter. In our experience, this label would not be seen as a positive one by either homeless or nonhomeless families. Thus, it is not clear whether the elevation in anxiety in homeless boys in this study may have been attributable to the "out-group" position in which they found themselves. The literature on emotional problems in homeless children is mixed.<sup>34</sup> No data were collected regarding the social-peer climate of the shelters or schools in the current study.

The lesser emotional problems in girls are also of interest; lower age-specific vulnerability to these problems, selection of the more vulnerable daughters for placement elsewhere, or greater protection of girls in shelters from a range of threats may explain the absence of differences between homeless and nonhomeless girls. Unfortunately, no information on these issues was available in this study. Furthermore, although we employed assessment instruments that were close to representing the standards for the field, they are not free of a variety of potential cultural biases. Finally, in the effort to untangle causal relationships, there is probably no more useful tool than longitudinal investigation: The current study is limited to cross-sectional data.

### CONCLUSION

We did not find evidence that homeless mothers were more impaired cognitively than other poor mothers, although neither group performed well in this study. Cognitive impairment in their children was also not elevated beyond that expected for offspring of mothers who were young, poorly functioning, and less scheduled, although some slight disadvantage may be present for girls. The rate of severe academic problems is well above that of other poor children and not taken into account by their intellectual functional difficulties or those of their mothers. Rather, these problems are attributable to the chaotic school careers of these children.<sup>13,39</sup> Because of maternal and demographic characteristics, these children were at risk prior to their homeless experience, which has no doubt resulted in the entrenchment of scholastic problems.

These findings provide a strong indication that there is a need to support an environment for study and learning facilities for the homeless children, as well as for appropriate intervention for children who show severe emotional and behavioral problems. Suggestions for interventions with mothers include ongoing counseling devoted to such issues as home organization, parenting skills, employment or training for employment, as well as appropriate treatment for depression or other emotional problems.

### ACKNOWLEDGEMENT

This study was supported by the National Institute of Mental Health, grant 1R01MH4632-01A1.

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