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Identifying Unmet Mental Health Needs in Children of Formerly Homeless Mothers Living in a Supportive Housing Community Sector of Care

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Abstract This study reports psychosocial characteristics of a sample of 111 children (K to 2nd grade) and their mothers who were living in urban supportive housings. The aim of this study was to document the various types and degree of risk endemic to this population. First, we describe the psychosocial characteristics of this homeless sample. Second, we compared this homeless sample with a grade-matched, high-risk, school-based sample of children (n= 146) who were identified as showing early symptoms of disruptive behaviors. Third, we compared the parents in both samples on mental health, parenting practices, and service utilization. Results showed that children living in supportive housing were in the at-risk range and had comparable levels of externalizing problems, internalizing problems, school problems and emotional strengths with the school-based risk sample receiving prevention services at a family support community agency. Mothers in supportive housing reported significantly higher psychological distress, less optimal parenting practices and greater service utilization. These findings are among the first to provide empircal support for the need to deliver prevention interventions in community sectors of care.

Keywords Prevention · Supportive housing · Homelessness · Children · Families

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Recent data suggest that children are increasingly receiving mental health services in non-mental-health systems (Ringel and Sturm 2001). For example, government agencies serving children who are at risk of being removed from their homes and communities (e.g., child welfare, juvenile justice, dependency courts) are developing capacity to provide early detection of mental health problems and function as vital brokers or providers of mental health services. These non-mental health service settings are important service delivery portals because the children entering these systems are likely to have high rates of mental health problems and high rates of unmet needs due to exposure to a broad range of psychosocial risks. While population prevalence rates indicate that approximately 15–20% of community youth meet criteria for a psychiatric disorder (Shaffer et al. 1996), estimates of diagnosed disorders among children in the child welfare system are much higher ranging from 29% to 80% (Landsverk and Garland 1999; Pilowski 1995). In a study of children in detention in the Chicago juvenile justice system a prevalence rate for mental health disorders of 66.3% was reported (Teplin et al. 2002).

With increasing frequency nontraditional community child-serving organizations also are coming to recognize the mental health needs of their child constituencies (Gewirtz and August 2008). These nontraditional organizations provide services to subgroups of children who may be at elevated risk for mental health problems by virtue of exposure to stressful life experiences. These circumstances include, but are not limited to poverty (food shelves, community centers, homeless shelters), domestic violence (battered women's shelters), parental illness or disability (foster care and adoption agencies), and combinations of the above (supportive housing agencies). In addition, there are

faith and community centers and social service agencies that provide basic living necessities to a broad constituency. Consideration of prevention and mental health promotion services could be included in these efforts. It remains a question as to whether those serving families in these vulnerable circumstances may accept responsibility to serve the significant proportion of children eligible for preventive mental health efforts.

If community organizations of the type mentioned above are to realize their potential as portals for mental health care we need to learn more about the populations they serve, including the mental health needs of their clients, and the capacities of their organizational structures for providing a continuum of prevention services and mental health care. The present study focuses on a highly vulnerable population (homeless children) and the community sector that serves them (supportive housing). The overarching aim is to determine the unmet mental health needs evidenced by children of formerly homeless mothers now living in a supportive housing environment. Estimates suggest that each year 3.5 million American citizens experience homelessness and of this number, 1.3 million are children (The National Law Center on Homeless and Poverty 2004). It is also estimated that families with children account for about 40% of the homeless population (National Alliance to End Homelessness 2007; U.S. Conference of Mayors 2004). The population of homeless families is on the increase due to a variety of personal exigencies, government policies, and financial circumstances. These displaced and disenfranchised families suffer from multiple risk factors, including high rates of mental illness and substance use and abuse (Burt et al. 1999; North et al. 2004).

Efforts have been made to provide long-term support to stabilize housing for homeless families. Family supportive housing, formalized through the 1987 McKinney Homelessness Act, combines support services with subsidized housing for homeless families. Since 2003, allocation of supportive housing resources by the US Department of Housing and Urban Development has been limited to households with caregivers with disabilities (primarily mental illness, chemical dependence and HIV/AIDS) who also meet criteria for chronic homelessness, defined as twelve consecutive months of homelessness, or four episodes in the last 3 years. These criteria suggest that families in supportive housing may have significant histories of risk and adversity, providing a rationale for the urgency to learn more about the adjustment and needs of children in these settings (Gewirtz 2007). An example of such supportive housing services is the Healthy Families Network (HFN). The HFN is a partnership between a group of independent, non-profit organizations with supportive housing programs and the Family Housing Fund (a non-profit housing intermediary whose mission is to produce and preserve affordable housing in the Twin Cities metropolitan area). The network includes 18 supportive housing agencies that provide transitional or permanent residence for parents (primarily single mothers) with a history of spousal abuse, mental illness, and/or substance abuse.

A need for mental health services for both mothers and children residing in the 18 agencies was determined by an informal survey of case managers and parents conducted by the Network. Survey data of 454 children revealed concerns about the emotional and behavioral adjustment of 14% of birth to 4 year olds, 47% of 5–11 year-olds, and 67% of adolescents (Gewirtz et al. 2008). In addition, a provider-driven survey of existing mental health and psychosocial resources available to residents in the housing agencies revealed a lack of services for screening, assessment, prevention, treatment, and mechanisms for referrals to community-based mental health agencies. The HFN subsequently partnered with prevention researchers at the University of Minnesota to form a community–university collaborative whose overall goal was to bring evidence-based mental health care to children living in family supportive housing (Gewirtz 2007). To set a course for achieving this goal the HFN agreed to adopt the Early Risers "Skills for Success" prevention program.

Early Risers is an early-age-targeted prevention program that was designed for children at elevated risk for the development of serious conduct problems and health compromising behaviors such as drug abuse (August et al. 2001, 2002, 2003). The Early Risers intervention model includes two child-focused components and two parent/family-focused components that address both skills training and personalized support and are delivered as a coordinated package by a "family advocate" implementer over a multiyear period. Early Risers was validated in both efficacy and effectiveness trials (see August et al. 2007 for summary of studies). A recent program evaluation study demonstrated that the practice infrastructure of the Early Risers program could be sustained with local funding in a community system of care (Bloomquist et al. 2008). The program was subsequently reformulated as a *prevention service system* that allows for flexibility in the use of different evidence-based curricula and practice parameters within components to account for differences that may exist in client characteristics (e.g., cultural, socioeconomic status), community settings (e.g., urban, rural), as well as differential preferences of the providers themselves (e.g., curricula, mode of delivery). The efficacy, effectiveness, and sustainability studies laid the foundation in the current study for use of Early Risers as a preventive intervention targeting formerly homeless children residing in supportive housing.

The present study reports psychosocial characteristics of a sample of children and their formerly homeless mothers, who were living in urban supportive housing and were

recruited to participate in the Early Risers program. The specific aim of the study was to document the various types and degree of risk endemic to this population. This information would subsequently be used to assign children and their mothers to the level of prevention programming that best matched their assessed needs. In the present study we first describe the psychosocial characteristics of this supportive housing sample. We predicted that the children, as a group, would show a profile of emotional, behavioral, and academic problems that would place them in the at-risk range (normative data are provided when available). Next, to justify need for preventive mental health services, we compared this supportive housing sample (HFN) with a sample of children who had been identified and enrolled in the Early Risers program at a family support community agency [Pillsbury United Communities—PUC] as a consequence of a school-based screening of early aggressive behavior. We predicted that child risk status, as a group, would be comparable between the HFN and PUC groups. Last, in light of the circumstances that place families into supportive housing, we predicted that the parent(s) of the HFN sample would differ from the parents of the PUC sample in reporting a higher frequency of mental health-related concerns, less optimal parenting practices, and greater service utilization.

Methods

As noted above, two samples are compared in the present study. One sample includes children and mothers, who were formerly homeless, but presently living in supportive housing (HFN). The other sample includes children and mothers living in low-income, stable housing, recruited via neighborhood family resource centers (PUC). Both samples used in this study are child grade-matched (K to 2nd grade) and are located in one large Midwestern metropolitan area. This study is part of a large initiative evaluating the efficacy of community-based prevention services designed to reduce the risk for serious conduct problems in at-risk children. This article utilizes data collected from the initial assessment.

Intervention Sites for HFN

The HFN comprises 18 private, non-profit, single site family supportive housing agencies that serve approximately 600 families (with over 1,200 children) each year. This number represents approximately 90% of formerly homeless families residing in single site family supportive housing in a seven-county metropolitan area of more than 2.5 million people. HFN agencies are quite diverse in their missions, target populations, and criteria for admission, but most of the agencies provide permanent family supportive housing. Although the HFN's programmatic focus is single site family supportive housing, several of its member agencies also have scattered site housing units, and additionally serve single adults. Criteria for admission vary across agencies, but for the most part include family homelessness, parental mental illness, substance use disorder, HIV infection, and/or a mother and children fleeing domestic violence or prostitution. Staffing patterns vary across HFN sites, but most commonly, sites offer case management services to support families to maintain their housing, manage finances, access jobs, education and/or training, access health insurance, routine medical services, and other needed community resources. Some agencies have case managers who provide childcare and some offer after-school programming. Case managers typically have extensive experience accessing community resources and facilitating referrals, and the exceptionally high rates of health coverage among residents (Gewirtz et al. 2008) may be a testament to case managers' efficiency in accessing insurance for families. Two agencies out of the 18 decided not to participate in the study due to one agency having a shorter length of stay (6 month) and another having no children within the required age range for the study.

Intervention Sites for PUC

PUC is a community agency that provides family support and "safety-net" services to economically disadvantaged inner-city families through a network of six neighborhood centers. PUC has been a presence in Minneapolis neighborhoods for over a century. PUC creatively blends traditional social service with employment and economic development (small business ventures), arts and culture, and grass roots capacity-building (training, education, technical assistance). Within this setting, prevention programming, such as Early Risers, has become a vehicle to help high-risk children build key developmental strengths and help their families increase sustainable life skills and capacity for long-term self-sufficiency. PUC neighborhood centers are strategically located in close proximity to participant residences and schools and offer reasonably convenient access to program activities. Moreover, these neighborhood centers offer a high level of acceptability via a culturally responsive milieu where program activities could be contextualized directly in the cultural nexus of the family and community members.

Two PUC centers were selected for participation in this research study.[1] Each center was affiliated with two

[1] Selection of the two centers was an executive decision made by PUC administrators. Issues factored into the decision included (a) selection of one site in south Minneapolis and one site in north Minneapolis to maximize recruitment of eligible participants, (b) selection of sites with previous experience implementing the Early Risers program, and (c) selection of sites with sufficient resources and staff to implement the program.

elementary schools from which the child participants (kindergarten to 2nd grade) for the study were screened and recruited. Schools were equivalent with respect to ethnic representation of students (approximately 80% African American), grade structure (K-6), and percent students receiving free or reduce priced student lunches (approximately 85%).

Participants

Recruitment of Families Living in Supportive Housing Families with children (K to 6th graders) living in 16 single-site supportive housing communities in Minneapolis and St. Paul areas were invited to participate in a research trial testing the effectiveness of the Early Risers program. The program was introduced to them as an opportunity to participate in a health promotion program that would involve enrichment activities for children and parenting education and support for parents. A total of 253 children and their mothers (n=152 families) were recruited and provided consent/assent to enroll in the program. Eighteen of these families (with 40 children) relocated or dropped from the study immediately after recruitment resulting in a sample of 134 families. To compare this sample with a community risk sample screened and recruited for a separate research trial that was conducted by the authors concurrently in the same metropolitan area (see below for description of the PUC sample), a sample of 111 children and their mothers (n=111) was selected from the pool of 134 families (with 213 children), by including only one child per family who was between K and 2nd grade. If there were more than two children in the grade range within a family, one child was randomly selected for the current study.

Recruitment of Community Risk Sample Served by Family Support Community Agency By the time of conducting analysis for this study a total of 175 children and their parents (n=175) had consented to participate in a concurrent research trial testing the Early Risers program in PUC neighborhood centers in Minneapolis. These children (kindergarten to 2nd grade) were first referred and then screened by their classroom teachers for the presence of aggressive behavior using the aggression scale of the Child Behavioral Checklist-Teacher Report Form (Achenbach 1991). Children with screening scores $T \geq 60$ were invited to participate in the trial. Subsequently, 29 families of whom we had no baseline data or who dropped immediately following recruitment were excluded from the current study, thus leaving a total of 146 children and their parents in the PUC comparison group.

Data Collection Procedures

Written consent was obtained from parents in both samples in accordance with procedures approved by the IRB. Parents (usually the female caretaker) completed questionnaire packets during a home visit conducted by assessment technicians who were hired and trained by the researchers at the University. Each parent received a $50 cash payment for completing the questionnaires. Teachers received questionnaire packets placed in their school mailboxes with explicit instructions and were requested to complete and return them within a 4-week period. For each packet completed teachers received a $25 cash payment.

Measures

Family Background Information and Service Utilization A structured interview was administered to parents (mothers or other female caretakers) that asked about their family background characteristics including parents' age, income, education, and family structure. In addition information on parent's and child's service utilization was collected as part of the structured interview. Items asked whether parent or child utilized in the past year county social services, professional counseling services, medical or community services. For the HFN sample, we obtained an estimate of child's IQ using the Kaufman Brief Intelligence Test (K-BIT; Kaufman and Kaufman 1990). Also for the HFN sample, information was collected from the teachers, including child's special service status, individual educational plan (IEP), and ever suspended or expelled in the past school year.

Teacher Reports of Child Behaviors and Academic Functioning The Behavior Assessment System for Children (2nd Ed.)—Teacher Rating Scales (BASC2-TRS; Raynolds and Kamphaus 2004) is a multidimentional system used to assess broad domains of externalizing problems, internalizing problems, and school problems as well as adaptive skills (alphas = 0.85–0.89). Items are rated on a 4-point scale, ranging from 0 = never to 3 = almost always. Gender-specific normative scores are provided in the form of T-scores with a mean of 50 and a standard deviation of 10. The Behavioral and Emotional Rating Scale: A Strength-Based Approach to Assessment (2nd Ed.)—Teacher Rating Scale (BERS2-TRS; Epstein 2004) is a standardized scale designed to assess the behavioral and emotional strength of children on five dimensions: interpersonal strength, family involvement, intrapersonal strength, school functioning and affective strength (alphas = 0.79 to 0.97). The BERS2-TRS consists of 52 items, which are rated on a 4-point scale, ranging from 0 = not at all like the student to 3 = very much like the student. Gender-specific T-scores are presented with a mean of 50 and a standard deviation of 10. Teachers also rated children on the Academic Competence Evaluation Scales (ACES; DiPerna and Elliott 2000). The 73-item measure assesses student's academic skills, attitudes and behaviors that contribute to academic success (alphas = 0.94

to 0.99). Items are rated on a 5-point scale, ranging from 1 = never to 5 = almost always. Scores are provided in gender- and grade-specific *T*-scores.

Parent Reports of Child Behaviors, Parenting and Mental Health Parents rated child behaviors using the parent version of the BASC2 (BASC2-PRS; Raynolds and Kamphaus 2004). The PRS uses the same 4-point rating format as the TRS (alphas = 0.80–0.87). Parents also completed the parent version of the BERS2 (BERS2-PRS; Epstein, 2004) (alphas = 0.78 to 0.95). The Brief Symptom Inventory 18 (BSI-18; Derogatis 2000) is a self-report inventory that assesses psychological distress (alphas = 0.74 to 0.89). The measure has 18 items, six each on somatization, depression and anxiety, and responses are rated on a 5-point scale from 0 (not at all) to 4 (extremely). Gender-specific normative scores are provided in the form of *T*-scores with a mean of 50 and a standard deviation of 10. A self-report measure of parenting was administered: the Parenting Relationship Questionnaire (PRQ; Kamphaus and Raynolds 2006). The 71-item PRQ assesses parent's perspective of the parent–child relationship in seven dimensions including attachment, communication, discipline practices, involvement, parenting confidence, satisfaction with child's school and relational frustration (alphas = 0.78–0.93). Items are rated on a 4-point scale from 0 = Never to 3 = Almost Always. Gender-specific *T*-scores are provided with a mean of 50 and a standard deviation of 10.

Results

Demographic Characteristics

Table 1 shows demographic characteristics for the HFN and PUC prevention samples separately. The mean child age at baseline for the HFN sample was 6.8 years. Approximately 50% of the children living in supportive housing were

Table 1 Demographic Characteristics of the HFN and the PUC Samples

Variables	HFN (n=111) *M (SD)* or %	PUC (n=146) *M (SD)* or %	*t or* $\chi 2$
Mother/Family			
Mom's Age	32.55 (6.61)	32.15 (7.09)	0.45
Single parent household (%)	91	39	72.71***
# of siblings living with child	1.87 (1.35)	2.37 (1.69)	2.50*
# moved in last year	1.38 (1.22)	0.63 (0.92)	5.56***
Annual income (%)			32.02***
≤$20,000	93	61	
20,001–40,000	7	29	
>40,000	0	10	
Mom's Education level (yrs)	11.93 (1.78)	11.22 (3.25)	2.03*
Child			
Age	6.77 (1.32)	6.72 (0.99)	0.35
Gender (Male %)	50	61	3.33
Race (%)			18.19***
African American	50	53	
Caucasian	19	9	
Multiracial	21	10	
Other minority groups	11	27	
IQ			
Total	92.87 (11.93)	–	
Matrices	97.95 (12.72)	–	
Vocabulary	89.30 (13.22)	–	
Special service for EBD (%)	43	–	
Have IEP (%)	25	–	
Suspended or expelled (%)	17	–	

Data collection on IQ, special service for EBD, IEP, suspended or expelled was not part of the study protocol for the PUC research trial

HFN Healthy Family Network; *PUC* Pillsbury United Community; *EBD* emotional-behavioral disability; *IEP* individual educational plan

*p<0.05, ***p<0.001

African American, 21% were multiracial, 19% Caucasian, and 11% other minority groups. At the time of baseline assessment, 43% of the children living in supportive housing were receiving special services at school for emotional and behavioral difficulties, a quarter of them had an IEP, and 17% of the children had been suspended or expelled from school. The average age of mothers living in supportive housing was 32.6 years. Most of them (91%) were single parents and had annual income less than $20,000.

Comparisons between the HFN and the PUC samples on the demographic characteristics are also presented in Table 1. There were significant group differences in single parent status, number of siblings living with child, number of moves in the past year, annual income, mother's education level and child racial background. Families living in supportive housing were more likely to have single parent status, and on average had significantly lower income and less number of siblings living with target child compared to families of the community risk sample. Both groups were primarily comprised of African-American families. However, the racial breakdown showed that there were more Caucasian and multiracial children in the HFN sample and there were more other minority groups (e.g., Asian, Hispanic) in the PUC sample. Compared to the community risk sample, mothers living in supportive housing had slightly more years in education.

Child's Behavioral, Emotional, and Academic Strengths and Problems

Table 2 presents means and standard deviations of teacher and parent ratings on child's behavioral, emotional and academic strengths and problems. On the teacher-rated BASC2, the mean scores of the children living in supportive housing were about 0.5 standard deviation units above (internalizing problems, school problems) or below (adaptive skills) the normative means. The externalizing problems mean score (BASC2) was one standard deviation above the normative mean. Teacher evaluated children's behavioral and emotional strength scales (BERS2) had mean scores that were slightly below the normative means, although they were within the normal range. Academic competence evaluated by teacher ratings on reading and math scales (ACES) showed that the mean performances of the HFN sample on reading and math were below grade-

Table 2 Means and Standard Deviations on Child's Behavioral, Emotional and Academic Strength and Problems

Variable	HFN *M (SD)*	PUC *M (SD)*	*t*
Teacher ratings			
BASC2			
Internalizing problems	55.62 (11.43)	53.72 (13.32)	1.11
Externalizing problems	60.69 (13.75)	59.09 (14.61)	0.82
School problems	56.94 (10.62)	58.14 (9.04)	0.93
Adaptive skills	42.36 (7.90)	42.34 (7.54)	0.02
BERS2			
Affective Strength	48.65 (10.38)	51.04 (12.21)	1.52
Family Involvement	49.97 (9.86)	52.85 (10.37)	1.91
Intrapersonal Strength	45.82 (10.76)	48.12 (10.59)	1.56
Interpersonal Strength	46.73 (10.86)	48.37 (10.50)	1.11
School Functioning	44.18 (9.63)	44.62 (8.32)	0.36
ACES			
Reading	42.27 (7.94)	39.56 (6.70)	2.65**
Mathematics	41.50 (8.05)	38.17 (8.01)	2.92**
Parent ratings			
BASC2			
Internalizing problems	56.84 (12.56)	50.25 (10.08)	4.31***
Externalizing problems	60.39 (13.15)	53.96 (12.86)	3.65***
Adaptive Skills	43.15 (9.58)	45.48 (8.49)	1.89
BERS2			
Affective Strength	50.95 (9.19)	50.34 (8.27)	0.52
Family Involvement	50.39 (8.95)	50.72 (7.61)	0.29
Intrapersonal Strength	51.07 (9.77)	53.77 (8.96)	2.13*
Interpersonal Strength	46.05 (9.08)	48.76 (8.22)	2.31*
School Functioning	48.80 (9.90)	48.18 (9.22)	0.48

HFN Healthy Family Network; *PUC* Pillsbury United Community; *BASC2* the Behavior Assessment System for Children 2nd Ed.; *BERS2* the Behavioral and Emotional Rating Scale 2nd Ed.; *ACES* the Academic Competence Evaluation Scales

*$p<0.05$, **$p<0.01$, ***$p<0.001$

level expectations ($T<50$). When teacher ratings on the BASC2, BERS2, and ACES of the HFN sample were compared to those of the PUC sample, no significant group differences were found on the BASC2 or BERS2 scale scores. It is noteworthy that the externalizing behavior scores were comparable in both samples. Statistically significant group differences were found in the reading and math scores on ACES, although mean scores for both samples showed below grade-level performances.

Parent ratings on child's behavioral, emotional strength and problems for the HFN sample showed similar (or slightly more problematic) mean scores than teacher ratings (Table 2). Children living in supportive housing, rated by their parents, had a mean *T* score greater than 60 on externalizing behavior problems (BASC2), and showed *T* scores greater than 0.5 standard deviation units above (internalizing problems) or below (adaptive skills) the normative mean. Mean *T* scores on the parent-rated BERS2 subscales were near 50 (normative mean). Comparison of parent ratings between the two samples showed significant group differences in internalizing behavior problems (BASC2) and externalizing behavior problems (BASC2). Mothers from the HFN sample rated their children significantly higher on the two behavior problem scales compared to mothers from the PUC sample. On the BERS2 there were significant sample differences in intrapersonal strength and interpersonal strength. Mothers from the HFN sample rated their children as having less strength in the two areas compare to their PUC counterparts, although both sample means were in the normal range.

Service Utilization

Table 3 presents parent's and child's utilization of various social, community, and professional services for the HFN and PUC samples. Mothers who were living in supportive housings reported receiving various types of services, including medical services for self (95%), medical services for child (88%), financial assistance (86%), and housing (51%). More than half of the supportive housing sample reported using county social services for adult mental health (56%), professional individual counseling (60%), and/or medication for emotional issues (52%). Thirty percent of the children utilized child mental health services. Comparisons with the PUC sample on service utilization showed that significantly more families in the supportive housing utilized various types of services, including mental health services for parents and children (Table 3).

Table 3 Parent and Child Service Utilization (%) in the Past Year

Service	HFN	PUC	$\chi 2$
Parent's Service Utilization			
County Social Services			
Financial Assistance	86	49	32.28***
Housing Utilities	51	31	8.49**
Educational Assistance	29	9	14.28***
Employment Assistance	39	18	12.55***
Vocational Assistance	13	1	13.46***
Adult Mental Health	56	9	54.37***
Professional Mental Health Counseling			
Individual	60	8	67.09***
Family	29	3	31.21***
Substance use	26	0	35.76***
Gambling	1	0	1.22
Medication for emotional issues	52	10	45.63***
Medical service	95	72	20.09***
Community			
Club/Group	61	28	24.33***
Weight loss	7	3	2.51
Education	24	8	11.53**
Child's Service Utilization			
Community/County Services			
Social Clubs	37	16	12.72***
Church	55	39	5.50*
Sports	19	15	0.63
Child Protection	16	6	5.95*
Case Management	27	6	18.56***
Child Mental Health	30	9	15.46***
Medical Service	88	70	9.90**

HFN Healthy Family Network; *PUC* Pillsbury United Community
*$p<0.05$, **$p<0.01$, ***$p<0.001$

Mothers' Self-Report on Mental Health and Parenting

Means and standard deviations on mother's self-reported mental health and parenting practices for the two samples are presented in Table 4. On the BSI-18 scales, mothers living in supportive housing had *T* scores between 52 and 54, a range slightly elevated but nevertheless within the typical range of psychological distress found in a normative sample. Mothers of the HFN sample showed significantly higher mean scores on all subscales compared to the mothers of the PUC sample (Table 4). The results showed that on average mothers living in supportive housing had significantly higher psychological distress compared to the mothers in the community risk group. On the measure of parenting practices (PRQ) mothers living in supportive housing had mean *T* scores 0.5 standard deviation units below the normative means on attachment, communication, involvement, parenting confidence and relational frustration (half standard deviation above the normative mean). Compared to the PUC sample, mothers of the supportive housing sample had (a) comparable scores on attachment,

Table 4 Means and Standard Deviations of Mother's Self-Report on Mental Health and Parenting

Variable	HFN *M (SD)*	PUC *M (SD)*	*t*
Mental health (BSI-18)			
Anxiety	52.36 (10.33)	47.17 (9.02)	3.98***
Depression	53.81 (9.69)	48.50 (8.53)	4.32***
Somatization	53.88 (10.86)	48.58 (8.80)	4.00***
Parenting (PRQ)			
Attachment	45.22 (11.21)	46.26 (10.79)	0.70
Communication	44.99 (11.82)	47.09 (10.36)	1.40
Discipline Practices	47.99 (10.25)	45.55 (13.22)	1.51
Involvement	46.61 (9.17)	47.89 (11.07)	0.92
Parenting Confidence	44.63 (11.07)	51.18 (8.98)	4.85***
Relational Frustration	56.19 (12.89)	45.96 (10.13)	6.59***
Satisfaction with School	49.43 (10.30)	45.47 (11.86)	2.56*

HFN Healthy Family Network; *PUC* Pillsbury United Community; *BSI-18* the Brief Symptom Inventory 18; *PRQ* the Parenting Relationship Questionnaire

*$p<0.05$, ***$p<0.001$

communication discipline practices and involvement scales, (b) significantly worse scores on parenting confidence and relational frustration, and (c) significantly higher score on satisfaction with school.

Discussion

Empirical support was found to demonstrate that children residing in urban supportive housing (HFN) were at elevated risk for socio-emotional, behavioral and academic problems that placed them at risk for the development of mental health problems. On average, the supportive housing sample had scores greater than 0.5 standard deviation units above the normative means on teacher- and parent-rated emotional and behavioral problem scales. In fact, scores on scales measuring externalizing behavior problems were greater than one standard deviation above the normative mean. Likewise, scores on scales that measured child academic competence showed a similar pattern of findings. Children living in supportive housing had mean scores greater than 0.5 standard deviation units below the normative means on scales measuring reading and math competence (ACES). Mothers of these children showed less optimal parenting practices, where they had mean scores that were approximately 0.5 standard deviation units below the normative means on attachment, communication, parenting confidence, and relational frustration.

These findings are congruent with the literature documenting elevated risks in children's health, emotional, behavioral and academic functioning within homeless populations served by non-traditional community sectors of care. Previous studies comparing homeless children with those living in low-income, stable housing showed that homeless children had more health problems (Berti et al. 2001; Menke and Wagner 1998), higher rates of emotional problems (Bassuk and Gallagher 1990; Buckner et al. 1999), and disruptive behavioral problems (McCaskill et al. 1998; Yu et al. 2007). While some studies have noted low vocabulary scores in homeless children (Rescorla et al. 1991). Rubin et al. (1996) found no significant differences in cognitive ability between homeless children living in supportive housing and children living in stable housing.

The elevated risk profile of this supportive housing sample was further substantiated by comparisons on the same measures with a grade- and demographically-matched sample of children who were referred and screened at school for aggressive and disruptive behavior and enrolled in a prevention program at a local family support community agency. Children in both samples showed similar levels of behavioral and emotional problems as well as behavioral, social, and academic strengths. On reading and math competence (ACES) the supportive housing sample showed significantly higher scores compared to the community risk sample. The latter findings may reflect a teacher selection bias for the community sample (i.e., teachers referred children for the program and children referred may have had associated academic difficulties). When compared on measures of parent's mental health and parenting style, mothers living in supportive housings reported more psychological distress, less parenting confidence and more relational frustration with their children relative to mothers of the community risk group. These findings support the notion that this HFN sample may benefit from preventive services.

Regarding mental health services utilized, mothers in the supportive housing group reported significantly higher levels of service use compared to the community risk sample. This finding is not surprising considering the fact that HFN combines subsidized housing with services to promote mental and chemical health of supportive housing residents (Minnesota Council on Foundations 2006). In a study using a sample of single mentally ill adults, supportive housing has been demonstrated to be a cost-effective alternative to

hospitalization (Schinka et al. 1998). Providing preventive intervention that offers parenting skill building type services in such settings would be useful, especially for families with children. Mental health services offered via supportive housings are usually for treating severe mental illnesses, whereas preventive intervention programs, such as Early Risers, put emphases on parenting skills training and education, and family support. Supportive housings would gain greater success in stabilizing homeless families and strengthening the capacity of resident parents to care for their children by adding such parenting skills training and family support to their existing adult mental health services.

The mean scores on the teacher- and parent-rated BERS2 subscales for both samples were generally within the normal range. Unlike traditional symptom-focused measures of children, BERS2 is a strength-based measure that assesses behavioral and emotional strengths of children. We included this measure to assess whether these children possessed protective factors that might insulate them from the stressors they were exposed to. These results suggest that the adversity experienced by children in both samples has not yet completely eroded their psychosocial development. Despite emerging behavioral and academic difficulties, these children have areas of relative strength that may be further enhanced through prevention and health promotion programming.

Noteworthy was the finding that mothers in the supportive housing sample actually rated their children significantly more problematic on the BASC2 externalizing and internalizing behavior problem scales and significantly less competent on the BERS2 intrapersonal and interpersonal strength scales than their community risk counterparts. The significant differences between the two samples in parent-rated child dimensions may have roots in parent characteristics and perspective. Our data show that the two parent groups differ widely in multiple measures of stress, pathology and socioeconomic disability, where the supportive housing sample parents reported elevated levels of adversities compared to the community risk sample. The differences in parent characteristics may have dynamically influenced child behavior via child-caregiver interactions, causing increased child behavior problems in the home setting (Richters 1992). An alternative hypothesis is the "depressive realism hypothesis" (Alloy and Abramson 1979; Alloy et al. 1990; Ruehlman et al. 1985), which argues that individuals who experience emotional distress are more likely to make accurate, non-biased judgment of themselves and their circumstances compared to well-adjusted individuals who tend to possess more positively biased views. Parents from the supportive housing sample seemed to have rated their children more accurately. Exploratory *t*-tests comparing parent and teacher ratings (results not shown in this study) showed that parents' ratings on children internalizing behavior problems, externalizing behavior problems and adaptive skills (BASC2) were not statistically different from their teachers' ratings, while those from the community risk sample were significantly different from their teachers' ratings (parents had a more positive view).

Research investigating the impact of homelessness on children living in community sectors of care has shown that homeless children are more likely to be exposed to significant family adversities including unstable residence, poverty, domestic violence and/or mental and chemical health disorders in parents (Anooshian 2005; Bassuk et al. 1996; Vostanis et al. 1997). Masten et al. (1993) reported that homeless children were exposed to more recent adverse life events and showed more impaired school functioning than low income children living in stable housing. Other research has shown a relationship between family adversity and the development of conduct problems. Links have been demonstrated between conduct problems in children and low socioeconomic status (Bolger et al. 1995; Dodge et al. 1994), family instability (e.g., divorce, parental separations, multiple partners of mother, homelessness, father absence) (Ackerman et al. 1999, 2002; Juby and Farrington 2001; Pfiffner et al. 2001; Moretti et al. 2005), maternal depression (Ashman et al. 2008; Lovejoy et al. 2000), and exposure to family and community violence (Gorman-Smith and Tolan 1998; Miller et al. 1999). The relationship between conduct problems development and family adversity is mediated by maternal distress and disrupted parenting (Bank et al. 1993; Dodge et al. 1994; Kilgore et al. 2000; Linver et al. 2002). The current results document that many of these direct or mediated family risk factors are indeed present within this sample of children. Moreover, the children within supportive housing were already showing early problem development, a pattern of behavior comparable to a community risk sample. Thus, our findings provide a strong rationale for incorporation of the Early Risers prevention system within a supportive housing community sector of care, i.e., HFN.

The results of this study are instructive for how prevention interventionists conceptualize the universe of potential recipients for their programs. According to a report issued by the Institute of Medicine (Mrazek and Haggerty 1994), preventive interventions can be classified into three subcategories: universal, selective, and indicated preventive interventions. Universal prevention is directed at the general public that has not been identified on the basis of increased risk. Selective prevention targets individuals or population subgroups whose risk of developing a mental disorder is significantly higher than average as evidenced by biological, psychological, or social risk factors, such as exposure to harmful life experiences. Indicated prevention targets high-risk individuals who are identified as having minimal but detectable early symptoms but do not yet meet diagnostic

criteria for a disorder (Munoz et al. 1996). The present study highlights a group of children enrolled in the HFN-Early Risers prevention program who illustrate a selective prevention group. These children were selected on the basis of exposure to stress factors in their living environment (i.e., residents of supportive housing for formerly homeless mothers) and not on early symptom development. On the other hand, we regard the PUC sample as an example of an indicated prevention group, since children were identified on the basis of demonstrating pre-clinical levels of problem behaviors. By comparing the HFN sample (selective prevention group) to a demographically matched indicated prevention group (PUC sample), we were able to demonstrate that many children in this particular selective group were at imminent risk for mental health disturbance, similar to children in the indicated group, and thus in need of preventive intervention.

While the findings offered initial evidence for the need to deliver preventive interventions in community sectors of care, there were several limitations. First, measures on parent's mental health and parenting style were limited to self-report ratings. Social desirability, response set and willingness to report negative information are factors that might have affected parent's ratings, and thus explain in part why mean scores on the measures were in the normative range. Structured diagnostic interview of parent's mental health, especially on affective disorders and substance use disorder, and observational data on parenting practices would provide better information. Second, this was a cross-sectional study that limits investigation of trajectories of problem development in children and parents. A prospective study that follows a large number of families in both samples is needed to examine whether the two samples have similar patterns of developmental trajectories and how housing instability and parent/family distress influence children's problems over time. We are currently conducting longitudinal follow-up studies in both of the samples. We hope to shed some light in those areas in the near future. Finally, the supportive housing sample used in this study comprised of families who had been homeless and were living in supportive housing communities in a large Midwestern metropolitan area. The relative stability of supportive housing compared to crisis shelters suggests that findings from this study may not necessarily generalize to other homeless populations living in other communities.

In conclusion, these findings clearly point to the need for prevention services for children whose life circumstances present them with a myriad of life challenges. These children may include members of families who are recent immigrants, refugees, unemployed, displaced or victims of regional disasters. Some of these children can be found through agencies that offer a variety of relief or support services but whose mission may not include early identification or services for the children of the affected families. These agencies are well positioned to provide effective prevention intervention to the children who are at risk of developing behavioral and emotional problems. Evidence-based prevention programs have documented gains in behavioral, social, and academic outcomes that are linked to reductions in mental disorders and risky behaviors (Greenberg et al. 2001). However, the integration of prevention programs within community practice has been slow and tedious. The current HFN-University partnership effort presents an example of how prevention services may be embedded into the continuum of care for at-risk children in the community.

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References

Achenbach, T. M. (1991). *Manual for the teacher's report form and 1991 profile*. Burlington: Department o Psychiatry, University of Vermont.

Ackerman, B. P., Kogos, J., Youngstom, E., Schoff, K., & Izard, C. (1999). Family instability and the problem behaviors of children from economically disadvantaged families. *Developmental Psychology, 35*, 258–268.

Ackerman, B. P., Brown, E. D., D'Eramo, K. S., & Izard, C. E. (2002). Maternal relationship instability and the school behavior of children from disadvantaged families. *Developmental Psychology, 38*, 694–704.

Alloy, L. B., & Abramson, L. Y. (1979). Judgment of contingency in depressed and nondepressed students: sadder but wiser? *Journal of Experimental Psychology: General, 108*, 441–485.

Alloy, L. B., Albright, J. S., Abramson, L. Y., & Dykman, B. M. (1990). Depressive realism and nondepressive optimistic illusions: The role of the self. In R. E. Ingram (Ed.), *Contemporary psychological approaches to depression: Treatment, research and theory* (pp. 71–86). New York: Plenum.

Anooshian, L. J. (2005). Violence and aggression in the lives of homeless children: a review. *Aggression and Violent Behavior, 10*, 129–152.

Ashman, S. B., Dawson, G., & Panagiotides, H. (2008). Trajectories of maternal depression over 7 years: relations with child psychophysiology and behavior and role of contextual risks. *Development and Psychopathology, 20*, 55–77.

August, G. J., Realmuto, G. M., Winters, K. C., & Hektner, J. M. (2001). Prevention of adolescent drug abuse: targeting high-risk children with a multifaceted intervention model-The Early Risers "Skills for Success" program. *Applied and Preventive Psychology, 10*, 135–154.

August, G. J., Hektner, J. M., Eagan, E. A., & Realmuto, G. M. (2002). The Early Risers longitudinal prevention trial: examination of three-year outcomes in aggressive children with intent-to-treat and as-intended analyses. *Psychology of Addictive Behaviors, 16*, 27–39.

August, G. J., Lee, S. S., Bloomquist, M. L., Realmuto, G. R., & Hektner, J. M. (2003). Dissemination of an evidence-based prevention innovation for aggressive children living in culturally-diverse, urban neighborhoods: the Early Risers effectiveness study. *Prevention Science, 4*, 271–286.

August, G. J., Bloomquist, M. L., Realmuto, G. M., & Hektner, J. M. (2007). The Early Risers "Skills for Success" program: A targeted intervention for preventing conduct problems and substance abuse in aggressive elementary school children. In P. Tolan, J. Szapocznik, & S. Sambrano (Eds.), *Preventing youth substance abuse* (pp. 137–158). Washington, DC: American Psychological Association.

Bank, L., Forgatch, M. S., Patterson, G. R., & Fetrow, R. A. (1993). Parenting practices of single mothers: mediators of negative contextual factors. *Journal of Marriage and the Family, 55*, 371–384.

Bassuk, E. L., & Gallagher, E. (1990). The impact of homelessness on children. *Children and Youth Services Review, 14*, 19–33.

Bassuk, E. L., Weinreb, L. F., Buckner, J. C., Browne, A., Salomon, A., & Bassuk, S. S. (1996). The characteristics and needs of sheltered homeless and low-income housed mothers. *Journal of the American Medical Association, 276*, 640–646.

Berti, L. C., Zylbert, S., & Rolnitzky, L. (2001). Comparison of health status of children using a school-based health center for comprehensive care. *Journal of Pediatric Health Care, 15*, 244–250.

Bloomquist, M. L., August, G. J., Horowitz, J., Lee, S., & Jensen, C. (2008). Moving from science to service: transposing and sustaining the Early Risers prevention program in a community service system. *Journal of Primary Prevention, 29*, 307–321.

Bolger, K. E., Patterson, C. J., Thompson, W. W., & Kupersmidt, J. B. (1995). Psychosocial adjustment among children experiencing persistent and intermittent family economic hardship. *Child Development, 66*, 1107–1129.

Buckner, J. C., Bassuk, E. L., Weinreb, L. F., & Brooks, M. G. (1999). Homelessness and its relation to the mental health and behavior of low-income school-age children. *Developmental Psychology, 35*, 246–257.

Burt, M., Aron, L., Douglas, T., Valente, J., Lee, E., & Britta, I. (1999). *Homelessness: Programs and the people they serve*. Washington, DC: Urban Institute.

Derogatis, L. R. (2000). *Brief symptom inventory 18: Administration, scoring and procedures manual*. Minneapolis: Pearson Assessments.

DiPerna, J. C., & Elliott, S. N. (2000). *Academic competence evaluation scales: Manual K-12*. San Antonio: Psychological Corporation, A Harcourt Assessment Company.

Dodge, K. A., Pettit, G. S., & Bates, J. E. (1994). Socialization mediators of the relation between socioeconomic status and child conduct problems. *Child Development, 65*, 649–665.

Epstein, M. H. (2004). *Behavioral and emotional rating scale: A strength-based approach to assessment* (2nd ed.). Austin: PRO-ED.

Gewirtz, A. H. (2007). Promoting children's mental health in family supportive housing: a community–university partnership for formerly homeless children and families. *Journal of Primary Prevention, 28*, 359–374.

Gewirtz, A. H., & August, G. J. (2008). Incorporating multifaceted mental health prevention services in community sectors-of-care. *Clinical Child and Family Psychology Review, 11*, 1–11.

Gewirtz, A., Hart-Shegos, E., & Medhanie, A. (2008). Psychosocial status of homeless children and youth in family supportive housing. *American Behavioral Scientist, 51*, 810–823.

Gorman-Smith, D., & Tolan, P. H. (1998). The role of exposure to community violence and developmental problems among inner-city youth. *Development and Psychopathology, 10*, 101–116.

Greenberg, M. T., Domitrovich, C., & Bumbarger, B. (2001). The prevention of mental disorders in school-aged children: current state of the field. *Prevention and Treatment, 4*, 1–30.

Juby, H., & Farrington, D. P. (2001). Disentangling the link between disrupted families and delinquency: sociodemography, ethnicity and risk behaviors. *The British Journal of Criminology, 41*, 22–40.

Kamphaus, R. W., & Raynolds, C. R. (2006). *Parenting relationship questionnaire: Manual*. Minneapolis: Pearson Assessments.

Kaufman, A. S., & Kaufman, N. L. (1990). *Kaufman brief intelligence test: Manual*. Circle Pine: American Guidance Service.

Kilgore, K., Snyder, J., & Lentz, C. (2000). The contribution of parental discipline, parental monitoring, and school risk to early-onset conduct problems in African-American boys and girls. *Developmental Psychology, 36*, 835–845.

Landsverk, J., & Garland, A. (1999). Foster care pathways to mental health services. In P. Curtis, G. Dale Jr., & J. C. Kendall (Eds.), *The foster care crisis: Translating research into practice and policy* (pp. 193–210). Omaha: University of Nebraska Press.

Linver, M. R., Brooks-Gunn, J., & Kohen, D. E. (2002). Family processes as pathways from income to young children's development. *Developmental Psychology, 38*, 719–734.

Lovejoy, M. C., Graczky, P. A., O'Hare, E., & Neuman, G. (2000). Maternal depression and parenting behavior: a meta-analytic review. *Clinical Psychology Review, 20*, 561–592.

Masten, A. S., Miliotis, D., Graham-Bermann, S. A., Ramirez, M., & Neemann, J. (1993). Children in homeless families: risks to mental health and development. *Journal of Consulting and Clinical Psychology, 61*, 335–343.

McCaskill, P. A., Toro, P. A., & Wolfe, S. M. (1998). Homeless and matched housed adolescents: a comparative study of psychopathology. *Journal of Clinical Child Psychology, 27*, 306–319.

Menke, E. M., & Wagner, J. D. (1998). A comparative study of homeless, previously homeless, and never homeless school-aged children's health. *Issues in Comprehensive Pediatric Nursing, 20*, 153–173.

Miller, L. S., Wasserman, G. A., Neugebauer, R., Gorman-Smith, D., & Kamboukos, D. (1999). Witnessed community violence and antisocial behavior in high-risk, urban boys. *Journal of Clinical Child Psychology, 28*, 2–11.

Minnesota Council on Foundations. (2006). Giving stories: Minnesota grantmakers support early childhood development. *Giving Forum*, *29*, 6–7. Retrieved August 4, 2009, from http://www.mcf.org/mcf/forum/pdf/2006fall.pdf.

Moretti, M. M., Catchpole, R. E. H., & Odgers, C. (2005). The dark side of girlhood: recent trends, risk factors and trajectories to aggression and violence. *Canadian Child and Adolescent Psychiatry Review, 14*, 21–25.

Mrazek, P. J., & Haggerty, R. J. (1994). *Reducing risks for mental disorder: Frontiers for preventive intervention research*. Washington, DC: National Academy.

Munoz, R. F., Mrazek, P. J., & Haggerty, R. J. (1996). Institute of Medicine report on prevention of mental disorders: summary and commentary. *American Psychologist, 51*, 1116–1122.

National Alliance to End Homelessness. (2007). *Homelessness counts*. Washington, DC: Author.

National Law Center on Homeless and Poverty. (2004). *Increasing homelessness in the United States violates international law*. Retrieved January 9, 2009, from www.nlchp.org/view_release.cfm?PRID=26.

North, C. S., Eyrich, K. M., Pollio, D. E., & Spitznagel, E. L. (2004). Are rates of psychiatric disorders changing over time in the homeless population? *American Journal of Public Health, 94*, 103–108.

Pfiffner, L. J., McBurnett, K., & Rathouz, P. J. (2001). Father absence and familial antisocial characteristics. *Journal of Abnormal Child Psychology, 29*, 357–367.

Pilowski, D. (1995). Psychopathology among children placed in family foster care. *Psychiatric Services, 46*, 906–910.

Raynolds, C. R., & Kamphaus, R. W. (2004). *Behavior assessment system for children, 2nd Edition: Manual*. Circle Pines: American Guidance Service.

Rescorla, L., Parker, R., & Stolley, P. (1991). Ability, achievement, and adjustment in homeless children. *American Journal of Orthopsychiatry, 61*, 210–220.

Richters, J. E. (1992). Depressed mothers as informants about their children: a critical review of the evidence for distortion. *Psychological Bulletin, 112*, 485–499.

Ringel, J. S., & Sturm, R. (2001). National estimates of mental health utilization and expenditures for children in 1998. *Journal of Behavioral Health Services Research, 28*(3), 319–333.

Rubin, D. H., Erickson, C. J., San Agustin, M., Cleary, S. D., Allen, J. K., & Cohen, P. (1996). Cognitive and academic functioning of homeless children compared with housed children. *Pediatrics, 97*, 289–294.

Ruehlman, L. S., West, S. G., & Pasahow, R. J. (1985). Depression and evaluative schemata. *Journal of Personality, 53*, 46–92.

Schinka, J., Francis, E., Hughes, P., LaLone, L., & Flynn, C. (1998). Comparative outcomes and costs of inpatient care and supportive housing for substance-dependent veterans. *Psychiatric Services, 49*, 946–950.

Shaffer, D., Fisher, P., Dulcan, M., Davies, M., Piacentini, J., Schwab-Stone, M., et al. (1996). The NIMH diagnostic interview schedule for children version 2.3 (DISC-2.3): description, acceptability, prevalence rates and performance in the MECA study. Methods for the epidemiology of child and adolescent mental disorders study. *Journal of the American Academy of Child & Adolescent Psychiatry, 35*, 865–877.

Teplin, L. A., Abram, K. M., McClelland, G. M., Dulcan, M. K., & Mericle, A. A. (2002). Psychiatric disorders in youth in juvenile detention. *Archives of general psychiatry, 59*, 1133–1143.

US Conference of Mayors. (2004). *A status report on hunger and homelessness*. Washington, DC: Author.

Vostanis, P., Grattan, E., Cumella, S., & Winchester, C. (1997). Psychological functioning of homeless children. *Journal of American Academy of Child and Adolescent Psychiatry, 36*, 881–889.

Yu, M., North, C. S., LaVesser, P. D., Osborne, V. A., & Spitznagel, E. L. (2007). A comparison study of psychiatric and behavior disorders and cognitive ability among homeless and housed children. *Community Mental Health Journal, 44*, 1–10.