Published in final edited form as:

J Emot Behav Disord. 2011 September ; 19(3): 169–181. doi:10.1177/1063426610377898.

Do social networks push families toward or away from youth mental health services?: A national study of families in child welfare

Jonathan I. Martinez and Anna S. Lau

University of California, Los Angeles

Abstract

Social support networks may encourage or dissuade help-seeking for youth behavior problems in ways that contribute to racial/ethnic disparities in mental health services. We examined how parental social network characteristics were related to the use of mental health services in a diverse sample of families in contact with Child Welfare. Data from 1519 families of White (n=812), African American (n=418), and Latino (n=289) origin were drawn from the National Survey of Child and Adolescent Well-Being. Data were collected prospectively after the initiation of a Child Welfare investigation for alleged maltreatment. Results revealed that parental perceptions of support were negatively associated with service use across racial/ethnic groups, and this association was explained by better subsequent mental health status enjoyed by children of parents with stronger social support. Moderator analyses suggested that larger social networks were associated with a decreased use of services among Whites and more highly educated families.

Introduction

It is estimated that 7.5 million U.S. children have unmet mental health (MH) needs, defined as lack of MH service use when psychopathology and/or functional impairment are present (Katakoa, Zhang, & Wells, 2002), and within this population, ethnic minority children have demonstrated higher rates of unmet need than non-Hispanic White children (Yeh, McCabe, Hough, Dupuis, & Hazen, 2003). Youth in Child Welfare (CW) are also of particular concern, as these youth often face a complex constellation of risk factors for negative outcomes in social, academic, and MH domains. Indeed, up to 80% of youth involved in the CW system have emotional/behavioral disorders, or are in need of MH intervention (Taussig, 2002). Beyond racial/ethnic disparities in MH service use in general, there is also evidence that these disparities are pronounced among youth in CW. For example, African American and Latino youth in CW are half as likely to receive MH services compared to non-Hispanic White youth (Leslie et al., 2005). Thus, it is important to identify factors that contribute to documented racial/ethnic service use disparities for youth with MH needs served by the CW sector, as appropriate and timely delivery of effective services is crucial to reducing negative outcomes.

Social networks have been identified as an important factor that may influence the likelihood that parents seek MH services for their children (Costello, Pescosolido, Angold, & Burns, 1998). Although definitions of the social network construct vary from study to study, most

conceptualizations generally consider 1) the qualitative or functional aspects of social networks such as the degree of satisfaction with perceived social support (Sarason, Levine, Basham, & Sarason, 1983) and 2) the quantitative or structural aspects of social networks such as the size and frequency of contact with supportive individuals (Broadhead, Gehlbach, de Gruy, & Kaplan, 1988).

Existing literature with adults demonstrates that social networks are influential to MH service seeking, but few studies have examined how parents' social networks operate in their decisions to seek MH care for their children. Parents' experiences with social support may influence their perceptions of need for treatment, as well as their attitudes toward and knowledge of MH services thereby influencing subsequent decisions to seek care for their child (Costello et al., 1998). Compared to other parents, families involved in the CW sector report experiencing greater isolation, more loneliness, and less social support (Bishop & Leadbeater, 1999; Coohey, 1996). These social network characteristics may certainly be related to risk of child maltreatment and parental well-being. Moreover, it may be important to understand the implications of these social contexts for parental perceptions of MH need, patterns of treatment seeking, and likelihood of follow-through with referrals to MH services among families in CW.

Although the influence of social networks on MH service use has been well-studied, most studies examine this association in general adult populations, and the directionality of this effect has been inconsistent. Gourash (1978) offered four explanations for how social networks may influence help-seeking behavior in adults. Social networks may influence an individual's decision to seek services by 1) improving the MH status of the individual, thus reducing the need for help, 2) substituting for professional MH care by providing emotional or instrumental support to the individual, 3) helping to identify problems and locating available supportive services for the individual, and 4) transmitting attitudes, values, and norms about formal help-seeking to the individual, thus impacting his/her decision to use professional services. Golding and Wells (1990) note that these possibilities posit variably positive and negative associations between social support and help-seeking.

Both the first and second hypotheses suggest that having larger and more supportive networks should decrease MH service use. With respect to the first hypothesis, the decrease in MH service use associated with larger and more supportive networks occurs because of related improvement in the individual's MH status. In other words, the availability of a supportive network improves MH status, thus reducing the need to seek MH care. However, the second hypothesis suggests that social networks become a major source of instrumental support for the individual, thereby substituting for professional treatment. In contrast, the third hypothesis suggests that larger and more supportive networks should increase use of MH services perhaps by encouraging steps towards finding care and identifying resources and pathways to assistance. Finally, the fourth hypothesis suggests that certain characteristics of the individual's social network will determine whether social support will facilitate or hinder seeking care. Gourash's (1978) model has clear applications for the study of MH service use patterns among families in CW. It may elucidate the role of social networks on help-seeking in a population at very high risk for having sparse social networks offering meager support.

This range of ways in which social networks may influence MH service use decisions may help explain the inconsistencies in the literature. For example, several studies have found that having greater perceived support and larger social networks facilitates MH service use, in concordance with Gourash's (1978) third hypothesis (Catalano, Rook, & Dooley, 1986; Harrison, McKay, & Bannon Jr., 2004; Kadushin, 1966; Morrissey-Kane & Prinz, 1999), perhaps because supportive figures help identify MH problems and encourage and facilitate steps towards seeking help. In contrast, other studies report that having greater support appears to impede MH service use (Bussing, et al., 2003; Dixon, 1986; Golding & Wells, 1990; McMiller & Weisz, 1996; Miville & Constantine, 2006; Pescosolido, Wright, Alegria, & Vera, 1998; Sherbourne, 1988; Thompson et al., 2007; Woodward, Dwinell, & Arons, 1992). These findings are consistent with the contention that social networks decrease service use by either improving one's MH status or by substituting for professional care. However, Golding and Wells reported that the negative relationship between social support and service use was not mediated by psychiatric status, leading them to support the care-substitution explanation.

Finally, Gourash (1978) also attended to the likelihood that the influence of social networks may depend on local attitudes towards the formal MH care sector. A positive association between perceived support and MH service use would be expected in groups that value professional MH services, whereas a negative association would be expected in groups that distrust or see little value in seeking MH services (Golding & Wells, 1990). A related theoretical framework has been posited by Pescosolido and colleagues (Pescosolido, 1992; Pescosolido et al., 1998). The Network Episode Model (NEM) proposes that the availability of social networks (e.g. size, range) determines the degree of potential influence of the social network on using professional MH services, while the content (e.g. beliefs and values of the network members) determines the "push" toward or "pull" away from obtaining help with healthcare providers. Costello et al. (1998) reconceptualized the NEM to address the specific factors that influence MH service use for children and adolescents. Because children rarely refer themselves for treatment, Costello et al. emphasizes the importance of the beliefs, attitudes, and norms of the parents' social network towards the professional MH sector in determining MH care decisions for their children.

It is possible that in different sociocultural groups the function of the parents' social networks may vary, either facilitating or impeding MH service use for their child depending on the prevailing attitudes of their specific cultural group. One indicator of culture that may influence attitudes towards help-seeking and use of professional MH services is race/ethnicity (U. S. Department of Health and Human Services [USDHHS], 2001). The differential function of minority parents' social networks on service use decisions in their children may contribute to the observed racial/ethnic disparities in the utilization of youth MH services. For example, a coping preference attributed to African Americans in dealing with MH concerns involves turning to significant others in the community, especially family, friends, neighbors, and religious figures for assistance (Snowden, 2001). McMiller and Weisz (1996) found that for over two-thirds of parents of minority youth in MH treatment, seeking help from professionals and agencies was not their first choice. Thus, lower rates of service use among minority families may indicate that parents choose to address their children's MH problems through these informal support networks (Snowden, 2001).

If members of ethnic minority social networks are more likely to act as substitutes for professional help, then having larger and more supportive social networks may lead to decreased use of services by minority families. Consistent with this hypothesis, studies with Latino adults have shown a negative relationship between perceived social support and MH service use (Golding & Wells, 1990; Miville & Constantine, 2006; Pescosolido, et al., 1998; Woodward et al., 1992). These findings support the possibility that social networks may serve as an alternative to formal MH care or improve the MH status in Latino adults. Perhaps by extension, Latino parents with strong social support may likewise have alternatives to formal MH services for child problems, or familial social support may improve children's MH status over time reducing need for treatment.

However, the relationship between perceived social support and MH service use has been inconsistent in studies of Non-Hispanic White adults and families, with some studies showing a negative relationship between perceived social support and MH service use (Golding & Wells, 1990; Thompson et al., 2007), while other studies showing a positive relationship between social support and MH service use (Kadushin, 1966). The literature is also mixed when examining these relationships with African American adults and families, with some studies showing a negative relationship between perceived social support and MH service use (Bussing et al., 2003; Thompson et al., 2007), while another study showing a positive relationship between perceived social support and MH service use (Harrison et al., 2004).

In sum, although the literature for Latino samples shows that larger and more supportive networks is associated with a decreased use of MH services, the literature involving non-Hispanic White and African American samples is mixed with indications that social support may either impede or facilitate help-seeking. One study examined the potential moderating effect of race/ethnicity on social networks and MH service use in non-Hispanic White and Mexican American adults (Golding & Wells, 1990), but no significant interactions were detected. Few studies to date have examined how parents' social networks may operate to influence parents' decisions to obtain MH services for their children. This research may be especially important for populations with high levels of racial/ethnic diversity that evidence high mental health needs, such as children who have come into contact with CW (Taussig, 2002).

Aside from race/ethnicity, another dimension of social diversity that may covary with attitudes toward the formal MH care sector is socioeconomic status (SES), often represented by variables such as family-level income and educational attainment. Previous studies with adults have shown mixed findings in the relationship between family SES and MH service use (Wells, Manning, & Benjamin, 1986; Wells, Manning, Duan, Newhouse, & Ware, 1986). Some evidence indicates that higher parental education increases the likelihood that a child will receive MH services (John, Offord, Boyle, & Racine, 1995; Padgett, Patrick, Burns, Schlesinger, & Cohen, 1993), while other studies suggest that children from disadvantaged homes are more likely to receive mental health services (Burns et al., 1995) and to be referred to child psychiatrists (Garraida & Bailey, 1988). These main effects are difficult to interpret as SES may covary with other access issues such as insurance status, and may not primarily reflect attitudes. However, examining the potential differential function of social

networks across socio-economic groups may help to illustrate the social context of help-seeking patterns.

The Current Study

The current study seeks to address a gap in the literature by examining important factors that impact service use decisions for ethnically diverse children in CW, namely, the role of parents' perceived social support and network size. There are few longitudinal studies using nationally representative samples that directly examine factors related to MH service use among families who have recently been investigated for suspected child abuse or neglect. These families have all recently experienced a stressful encounter with Child Protective Services (CPS) and many have undergone accompanying disruptions in their home environment which can introduce further risks to child well-being (Leslie et al., 2005). The CW system appears to be a major pathway into MH services for at-risk youth, and the months following CPS contact may represent a unique window to investigate factors that promote or deter service use. Thus, it is important to understand factors associated with youth MH service use, especially for families from diverse ethnic, cultural and socio-economic groups for whom disparities in service use have previously been identified. Among children in CW, African American and Latino youth are half as likely to receive MH services compared to non-Hispanic White youth (Leslie et al., 2005). Examining potential racial and socioeconomic variation in the role of social networks in mental health utilization may be particularly illustrative in a CW sample where race and SES are less likely to be confounded as is typically the case in the general population.

We examined the role of parental social networks in prospectively predicting use of youth MH services. We sought to determine if this relationship supports any of the four models proposed by Gourash (1978). First, we explored the association between parent's perceived social support and network size on subsequent use of youth MH services in the 12-month period following initial CW contact. We posed no directional hypotheses, as there is evidence indicating that greater perceived support and network size may be associated with either an increase or decrease in youth MH service use. Second, in the event that greater perceived support and/or network size was associated with decreased likelihood of using MH services, we examined whether this association was mediated by youth MH status. Such mediation would be consistent with the notion that parental social networks result in less reliance on MH services because of associated improvements in the child's MH status. Third, we examined sociocultural factors (race/ethnicity, family income, and parental education) as potential moderators of the relationship between parent's perceived social support/network size and youth MH service use. We examined whether these demographic factors would moderate the relationship between perceived support/network size and service use in a manner consistent with Gourash's fourth hypothesis that differential effects of the function of perceived support can be expected for different sociocultural groups (Golding & Wells, 1990; Gourash, 1978; Pescosolido et al., 1998).

Method

Participants

This study utilized data from the National Survey of Child and Adolescent Well-Being (NSCAW), the first national prospective study that examined the experiences of children and families involved with CW. NSCAW surveyed caregivers of 5,501 children (46.7% non-Hispanic White, 28.4% African American, and 17.8% Latino) from birth to age 14 at the time of sampling, who had contact with the CW system during a 15-month period starting October 1999. We included participants in the current study where the focal child was four years of age or older ($n=3177$), where the caregiver self-identified as non-Hispanic White, African American, or Latino ($n=2608$), and where the caregiver completed a follow-up interview 12 months later and the youth remained in their homes of origin during this 12-month period ($n=1651$). We conducted attrition analyses to detect whether the follow-up sample differed from the families who were lost to contact ($n=957$). There were no significant differences between the groups at baseline in terms of race/ethnicity, child MH status, family income, parental education, perceived social support and network size. For the current study, missing data was deleted listwise. Among the 1651 eligible families, complete data for all study variables was available for 1519 participants. We conducted analyses to detect differences at baseline between the families with and without complete data ($n=132$). There were no significant differences between the groups at baseline in terms of race/ethnicity, child MH status, family income, parental education, perceived social support and network size.

Procedures

Families who had contact with the child welfare system in 97 counties nationwide during a 15-month period starting October 1999 were randomly selected to participate in NSCAW. Children's parents, non-parent caregivers (e.g., foster parents), teachers, and CW investigators were all interviewed whenever possible. Non-parent caregivers represented 37 of 1519 (2.4%) of the current sample. Those who elected to participate initially completed a face-to-face interview in their home (Wave 1). These families were reassessed 12, 18, 36, and 60 months (Waves 2–5) after the initiation of the CW investigation. The current study examined data from the Wave 1 and 2 interviews during the 12 month period following initial CW contact.

Measures

Child Age (range = 4–14 years, $M = 8.98$, $SD = 3.2$) and Child Gender (female $n=798$; 52.5%) was measured by parental report at Wave 1, and were entered as control variables in the analyses. Race/Ethnicity was determined by parental report at Wave 1 caregiver interview: non-Hispanic White ($n=812$; 53.5%), African American ($n=418$; 27.5%), and Latino ($n=289$; 19.0%). Parental Education was determined at Wave 1 caregiver interview, which allowed participants to report their level of educational achievement at various levels (i.e., none, High School (HS) equivalency, HS diploma, vocational tech, associate degree, bachelors degree, masters degree, M.D., Ph.D., professional degrees). For the current study, three levels of parent education were categorized to indicate less than HS diploma, HS graduate/diploma, and some college or above. Family income was reported on scale that

allowed participants to report a value ranging from 1–11 that corresponded to distinct annual income levels (e.g., below 5000, 5000–9999, ...40000–44999, 45000–49999, above 50000). Given that this is a low-income sample and this variable did not account for the number of dependents in the family, an index of family income was created by indexing the reported family income against the Federal Poverty Level (FPL) for family size, yielding three categories (below FPL, between 100%–200% FPL, and above 200% FPL). See Table 1 for sample descriptives of demographics and study variables.

Parents' Perceived Social Support and Network Size was measured at Wave 1 caregiver interview using items from versions of the Social Support Questionnaire (Sarason et al., 1983) and the Functional Social Support Questionnaire (Broadhead et al., 1988). This resulted in one 14-item social support measure that assesses the number of parents' perceived supportive figures (0–99) and satisfaction with perceived social support that is available (1 = Very Dissatisfied, 2 = Dissatisfied, 3 = Satisfied, 4 = Very Satisfied) for seven different social support functions (e.g., help with child care, help with transportation, help with housework, etc.) For the current study, the mean number of supportive figures and the mean ratings of satisfaction for the 14-item measure were assessed separately. In this sample, the mean number of perceived social contacts was 2.77 (SD = 2.89), and mean satisfaction with perceived social support was 3.37 (SD = .56). The internal consistency of the perceived social support scale in the current sample was adequate ($\alpha = .71$).

Youth MH status was assessed using the Child Behavior Checklist (CBCL), a standardized measure of children's emotional/behavioral problems with well-established reliability and validity (Achenbach, 1991). The CBCL is a parent-report questionnaire that employs age-normed comparisons of behavioral/emotional symptomatology for children/adolescents ages 2–18. For the current study, the CBCL total problems t-score collected at the Wave 1 caregiver interview was used (M = 58.83, SD = 12.10). The internal consistency of this scale in the current sample was good ($\alpha = .96$).

Youth MH Service Use was measured at Wave 2 caregiver interview using an adapted version of the Child and Adolescent Services Assessment (CASA; Burns, Angold, Magruder-Habib, Costello, & Patrick, 1996), a self-report instrument developed to assess use of mental health services by children and adolescents ages 8–18 years. In order to reduce the heterogeneity of youth services received in various settings, we examined the use of outpatient MH services at Wave 2 since the Wave 1 interview. For the current study, use of MH service at Wave 2 interview was determined by caregiver endorsement of their child receiving any type of outpatient MH service since the Wave 1 interview, which includes outpatient visits to a) a mental health center, b) a community health center, c) a day hospital/partial hospitalization, or d) a private professional, such as psychiatrists, psychologists, social workers, and psychiatric nurses. The CASA has demonstrated good reliability and validity for probing the use of outpatient MH services (Ascher, Farmer, Burns, & Angold 1996). In this sample, 22.4% of families (n=340) endorsed using an outpatient MH service between the Wave 1 and 2 interviews. See Table 2 for sample characteristics and MH service use.

Results

Analyses were conducted using STATA 9.2 (STATA Corp., 2005) software program to account for the complex survey design, with all analyses utilizing sampling weights so that estimates represent the original populations of service users. STATA subpopulation commands were used so that coefficients were calculated based on the current sample of 1519 youths, but standard errors were based on the total NSCAW sample of 5,501. Data was weighted in all analyses to ensure accurate representation of the service use population; however, all descriptives of samples were reported according to the original data with unweighted cases. Logistic regression analyses were utilized to explore the relationships among parents' perceived support/network size, youth MH service use, youth MH status, family income, and education according to Gourash's hypotheses regarding these relationships. Odds ratios (OR) are reported in all analyses and indicate the relative amount by which odds of the outcome increase (OR greater than 1.0) or decrease (OR less than 1.0) when the predictor value is increased by 1.0 units. All analyses controlled for youth age (continuous variable), youth gender (dichotomous variable), parental education (categorical variable: less than HS diploma, HS graduate/diploma, some college or above), and family income (below FPL, between 100%–200% FPL, above 200% FPL).

Question I: What is the association between parents' perceived social support and network size at Wave 1 on youth MH service use at Wave 2?

To examine this relationship, two binary logistic regression models were run to test the effect of parent's perceived social support and network size at Wave 1 (predictor variables) on youth MH service use at Wave 2 (outcome variable), controlling for youth age, youth gender, parental education, and income. Two separate models were run to test each social network variable; parents' perceived social support and network size. Youth age at Wave 1 was significantly associated with an increased use of youth MH services at Wave 2 (OR = 1.13, $p < .01$). Overall, African American youth were less likely to use MH services at Wave 2 compared to non-Hispanic White youth (OR = .38, $p < .05$). Youth MH status at Wave 1 was significantly associated with an increased use of MH services at Wave 2 (OR = 1.09, $p < .001$). Higher levels of parents' perceived support at Wave 1 was found to be significantly associated with a decreased use of youth MH services at Wave 2 (OR = .67, $p < .05$). That is, for every 1-unit increase in the parents' satisfaction with perceived support, the odds of using youth MH services decreased by a factor of .67. The parent's network size at Wave 1 was not significantly related to youth MH service use at Wave 2. Given that higher levels of parents' perceived support was associated with a decrease in youth MH service use, Question II was examined to determine if youth MH status mediated this relationship.

Question II: Does youth MH status mediate the relationship between parents' perceived social support at Wave 1 and youth MH service use at Wave 2?

The proposed mediational relationship was examined in three steps using logistic regression analyses in a procedure described by Baron and Kenny (1986) to examine such effects. A mediational effect was defined as a 10% change in OR for social support in relationship to MH service use at Wave 2 when MH status at Wave 2 was entered (Kleinbaum, Kupper,

Muller, & Nizam, 1998). All steps of the analyses controlled for youth age, youth gender, parental education, and family income. Figure 1 depicts the findings of the mediation model.

As seen in Table 3, the first step of mediation was established since higher levels of parents' perceived social support at Wave 1 was significantly related to decreased youth MH service use at Wave 2 (Question I above). The second step of our mediational analyses was to determine if parent's perceived social support at Wave 1 was significantly related to youth MH status at Wave 1. Multiple regression was used to detect this relationship. Parents' perceived social support at Wave 1 was found to be negatively associated with youth MH status at Wave 1 ($\beta = -3.43$, $p < .01$). The third step of our mediational analyses was to determine if youth MH status at Wave 1 (hypothesized mediator) was significantly associated with youth MH service use at Wave 2 while reducing the effect of parents' perceived support at Wave 1 on youth MH service use at Wave 2. To examine this relationship, parents' perceived support and youth MH status at Wave 1 were entered into the logistic regression model as predictor variables, with youth MH service use entered as the outcome variable, while controlling for youth age, youth gender, parental education, and family income. We found that youth MH status at Wave 1 was significantly associated with youth MH service use at Wave 2 (OR = 1.09, $p < .001$). Youth MH status significantly reduced the effect of parents' perceived support at Wave 1 on youth MH service use at Wave 2 (Step 1 OR = .67, $p < .05$; Step 3 OR = .82, $p = .39$, reflecting a 24.8% change in the standardized OR for parents' perceived support in relationship to youth MH service. In addition, perceived support was no longer significant in predicting service use when youth MH status was entered into the model (see Table 3). Based on mediation criterion of a 10% change in OR (Kleinbaum, Kupper, Muller, & Nizam, 1998) and reduction of the effect to nonsignificance, we concluded that youth MH status at Wave 1 mediated the relationship between parents' perceived support at Wave 1 and youth MH service use at Wave 2.

Question III: Do sociocultural factors (race/ethnicity, parent education, family income) moderate the relationship between parents' perceived social support or network size at Wave 1 and youth MH service use at Wave 2?

Six hierarchical logistic regression models were run to test the effect of race/ethnicity, parental education, or family income (hypothesized moderator variables) on the relationship between parents' perceived social support or network size at Wave 1 (predictor variables) and youth MH service use at Wave 2 (outcome variable). Six separate models were run to test each moderator variable and each social network variable (i.e., parents' perceived social support and network size). In the first step, youth age, youth gender, parental education, family income, race/ethnicity, youth MH status, and parents' perceived support or network size were entered into the model. In the second step, the two-way interactions terms were entered into the model (race/ethnicity X perceived support or network size, parental education X perceived support or network size, or family income X perceived support or network size). Table 4 displays the results of each step of the hierarchical models.

Race/ethnicity as a moderator—The interaction between Latino group membership and parents' network size was significant (OR = 1.47, $p = .05$), indicating that the relationship between parents' network size at Wave 1 and youth MH service use at Wave 2

differed for Latino vs. Non-Hispanic White youth. To follow-up on the significant interaction, two binary logistic regression analyses were employed to test the effect of parents' network size at Wave 1 on youth MH service use at Wave 2 for Latino youth and Non-Hispanic White youth separately. As depicted in Figure 2, a larger network size at Wave 1 was significantly associated with a decreased use of youth MH services at Wave 2 for Non-Hispanic White youth ($OR = .78, p < .05$). However, no significant relationship between parents' network size at Wave 1 and youth MH service at Wave 2 was found for Latino youth ($OR = 1.07, p = .71$). There were no significant interactions between race/ethnicity and perceived social support in predicting service use, and the adjusted Wald test did not significantly improve model fit with the addition of each set of race/ethnicity X social support interaction terms.

Family Income as a moderator—No significant interactions between family income and parents' perceived social support or network size were found in predicting youth service use, and the adjusted Wald test did not significantly improve model fit with the addition of each set of family income X social support or network size interaction terms.

Parental education as a moderator—Parental education was found to moderate the association between parents' perceived network size at Wave 1 on youth MH service use at Wave 2. Specifically, the interaction between the dummy variable indicating some college education and network size was significant ($OR = .74, p < .05$). As shown in Figure 3, a larger network size at Wave 1 was significantly associated with a decreased use of youth MH services at Wave 2 for the some college education group ($OR = .79, p < .05$). However, no significant relationship between network size at Wave 1 and youth MH service at Wave 2 was found for the no HS diploma group ($OR = 1.08, p = .48$; See Figure 3 for interaction plot). No significant interactions were found in the perceived social support model, and the adjusted Wald test did not significantly improve model fit with the addition of each set of education X perceived support interaction terms.

Discussion

The current study investigated the role of parents' social networks in the use of youth MH services for families coming into contact with the CW system. Based on inconsistencies in the literature on the function that social networks plays in using formal MH services, this study sought to clarify this relationship by examining whether support could be found for any of the propositions advanced by Gourash (1978). The current study also investigated if parents' social networks served a different function in youth MH service use for socio-cultural groups differing in racial/ethnic background, education, and income.

Our results indicated that higher levels of parents' perceived social support were associated with a decreased use of youth MH services use in the overall sample. However, the reported size of parent social networks was unrelated to youth MH service use. These findings are consistent with previous data demonstrating that the perceived size of social networks was unrelated to the use MH services, but perceived lack of social support was associated with increased MH service use (Golding & Wells, 1990). The degree of parent satisfaction with their support network may be more predictive of youth MH service use because having

enriching and meaningful relationships is more important than the number of friends or associations one can count. One's appraisal of the quality of support that is actually available to them is more important than their actual number of interpersonal contacts (Antonucci & Israel, 1986; Blazer, 1982; Broadhead, 1980; Surtees, 1980). Thus, the results reinforce the utility of examining the impact of social networks with distinct measures of perceived social support and network size which are only modestly correlated (Sarason, Sarason, Shearin, & Pierce, 1987).

Furthermore, the negative association between parents' perceived support and subsequent use of youth MH services may be interpreted as evidence either that parents' social networks indirectly improve the MH status of the child, thus reducing the need for professional services, or as evidence that family social networks substitute for professional services by providing emotional or instrumental support to the family. Specific support for the first explanation was apparent. We found that youth MH status mediated the relationship between parents' perceived support and later youth MH service use. Higher levels of parents' perceived support may buffer the experience of parental stress, improve family functioning, and foster healthier parent-child interactions, all of which may improve children's MH functioning. It is also likely that supportive family social networks directly confer help and resources to the child. These benefits of supportive social networks may thereby explain decreased reliance on MH systems of care.

Beyond these overall analyses, we went on to examine whether sociodemographic characteristics such as race/ethnicity, parental education, and family income would moderate the relationship between parents' perceived support or network size and youth MH service. This was based on the notion that there may be differential effects of the function of social networks for different sociocultural groups depending on the content of the network's attitudes toward services. Because social networks affect utilization by transmitting attitudes, values, and norms about help-seeking, sociocultural groups differing in these attitudes might differ in formal help-seeking behavior (Golding & Wells, 1990; Gourash, 1978; Pescosolido et al., 1998). We found some partial support for this idea. Specifically, having a larger social network was associated with a decreased use of MH services for non-Hispanic White youth but was unrelated to service use for Latino youth. No racial/ethnic differences were found between parents' perceived support and youth MH service use. Given the literature demonstrating an inconsistent relationship between the function of supportive social networks and service use for non-Hispanic Whites, this finding is perhaps not surprising. However, past literature had demonstrated that supportive networks decreased MH service use in Latino groups. It should be noted that most of the social network literature is in Latino adult populations, whereas this study specifically examined how parents' social networks operate to influence service use for their Latino children who have come into recent contact with the CW system. The function of social networks in this very specific population to ultimately affect parents' service use decisions may be starkly different from studies that have examined these relationships in Latino adults and non-CW youth populations. Also, race/ethnicity was used as a proxy of network members' attitudes use of formal MH services in the present study, and the attitudes and beliefs of important network members were not measured directly. Future research should examine these

interactions using larger samples and direct measurement of the network's attitudes towards MH service use through the use of a beliefs/values questionnaire.

After controlling for child MH status, the data revealed no income group differences in overall likelihood of receiving MH services nor were there income-based differences in the relationship between parents' perceived support or networks size and youth MH service use. However, we did find that children of parents with some college education were more likely to receive MH services at follow-up compared to children of parents who had less than a high school education. This may suggest that more highly educated parents have more favorable views of MH treatment or have better access to care. Yet, we also found evidence that the function of supportive networks in predicting MH help-seeking varied based on educational background. The size of the parents' social network was associated with a decreased use of youth MH services for parents with a college education, while network size was unrelated to service use for parents that without a HS diploma. Perhaps when more highly educated parents are embedded in a large and salient personal social network they may be more resistant to seek services such as those recommended or brokered by the CW sector. This resistance may due to a variety of reasons such as concerns about stigma within their social network, and these parents may turn to their social networks for support and guidance instead of following through with referrals by CW social workers. In contrast, when these more highly educated parents are more isolated with fewer social connections they may be more likely to act on social worker referrals into care.

Strengths and Limitations

The results of the study should be interpreted in light of some study limitations. First, since the sample included families who had been investigated for suspected abuse/neglect, the degree of generalizability to community samples may be limited. As such, findings should be interpreted within the context of an at-risk sample of youth who has had contact with the CW system. Second, as with any study of correlational data, we cannot infer causal direction in the associations between social network characteristics, child MH status, and service use. For example, in the first step of our mediation analyses we found that social support is negatively related to child MH status and interpreted this to be consistent with Gourash's (1978) hypothesis that familial social support directly or indirectly reduces subsequent child problems. However, it is also possible that having a child with behavioral problems could lead to increased need for resources, leaving the parents feeling more dissatisfied with aspects of their social support. Because these two variables were measured at the same time point, we cannot rely on timing to aid in our interpretation. Thus, replication is required with a fully longitudinal mediation model in which all variables are measured prospectively. Third, our study did not directly assess the social support network members' attitude towards MH services. Instead, use of sociodemographic variables such as race/ethnicity, income, and education were used as indicators or proxies of network members' attitudes towards MH help-seeking. Thus, attitudes of social network members' towards MH illness and treatments should ideally be measured directly in future studies. Fourth, the social support network of the child and the MH status of the parent was not assessed, which may also impact service use decisions in addition to the variables examined in this study. Other variables likely to predict service MH service use (e.g., local availability of MH care,

insurance coverage) were not included as covariates, as these variables were not available in the NSCAW dataset. Future studies may include a more comprehensive set of parental and child variables that are hypothesized to affect youth service use.

Despite these limitations, our study has important merits that warrant consideration. This study utilized a large, national representative sample of at-risk youth who have had contact with the CW system. There are few studies that directly examine service use patterns for children who undergo investigation for abuse or neglect but remain in their homes of origin. We examined social factors likely to be related to service use decisions in a large racially and ethnically diverse sample of youth, while controlling for some important sociodemographic variables that have been shown to be related to service use. These features afforded an opportunity to understand group variability in the associations between social network characteristics and MH service use.

Conclusion and Implications

In summary, we found that overall the quality of perceived social support is associated with a lower likelihood of seeking MH services among families who come into contact with the CW system. This suggests that socially isolated parents are more likely to capitalize on addressing their child's MH needs by using formal MH services, as they may be uniquely motivated by the subjective feeling of not having enough support and/or feeling isolated from their community. We found that this negative association between perceived support and service use was largely explained by better subsequent MH status enjoyed by children of parents with stronger social support. We did find some support for the notion that social networks may have different relevance for different sociodemographic groups. Our results suggests larger social networks are associated with a "push" away from MH services among Non-Hispanic Whites and more highly educated families coming into contact with the CW system. This pattern of lowered service use as a function of network size was not observed among ethnic minority families or among the less educated groups.

It is typically assumed that higher socioeconomic status and majority group families and communities have more favorable attitudes toward MH care relative to ethnic minorities and those with lower levels of education, and that the push out of services would be more pronounced in these latter types of networks. Yet, these patterns have not previously been studied in the unique context of families making contact with the CW system. The rather unexpected interactions between network size, education, and race/ethnicity should be interpreted in this specific context. When non-Hispanic White and socioeconomically advantaged families are immersed in a dense social network, they may be less likely to view a CPS investigation as a pathway into professional care for their children's needs. They may instead turn to their informal networks to address problems, as they may feel highly stigmatized by involvement in the CW sector, which primarily serves low-income families.

Ironically, then socioeconomically advantaged families with greater resources and social mobility may be less likely to follow through on the recommendation of CPS workers. However, children in these families may still present with significant emotional/behavioral problems and would receive benefit from formal MH care over and above the support that friends and family can provide. In these cases, clinicians and CPS workers may need to

focus particular attention on motivating engagement in services among highly educated, non-Hispanic White parents. Engagement should highlight the benefits of learning helpful child management strategies, and education about the child's symptoms of emotional and behavioral disorders. Toward this end, CPS systems should institute formal, standardized MH screening procedures as a routine part of needs assessments.

Our results also suggest that parental social isolation is associated with increased use of youth MH services among families in CW. As such, this may be a naturalistic motivating factor in service use decisions. For these families who may be more spontaneously inclined to seek care, it would be important to support their use of MH services by carefully assessing any barriers to care (e.g, transportation problems, child care, etc.) and work through problem-solving steps to facilitate engagement and treatment retention. It would also be important to help these parents develop their own sustainable social resources to reduce levels of isolation and encourage a sense of self-efficacy and empowerment to see themselves as important agent's of change in their child's emotional and behavioral adjustment.

References

- Achenbach, TM. Manual for the Child Behavior Checklist/4–18 and 1991 profile. Burlington, VT: University of Vermont, Department of Psychiatry; 1991.
- Antonucci TC, Israel BA. Veridicality of social support: A comparison of principal network members' responses'. *Journal of Consulting and Clinical Psychology*. 1986; 54:432–437. [PubMed: 3745595]
- Ascher BH, Farmer E, Burns BJ, Angold A. The child and adolescent services assessment (CASA): Description of psychometrics. *Journal of Emotional and Behavioral Disorders*. 1996; 4(1):12–20.
- Baron RM, Kenny DA. The moderator-mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations. *Journal of Personality and Social Psychology*. 1986; 51:1173–1182. [PubMed: 3806354]
- Blazer DG. Social support and mortality in an elderly community population. *American Journal of Epidemiology*. 1982; 115(5):684–694. [PubMed: 7081200]
- Bishop SJ, Leadbeater BJ. Maternal social support patterns and child maltreatment: Comparison of maltreating and nonmaltreating mothers. *American Journal of Orthopsychiatry*. 1999; 69(2):172–181. [PubMed: 10234383]
- Broadhead, WE. Master's thesis, School of Public Health. University of North Carolina at Chapel Hill; 1980. Social support, life change and illness in elderly Durham County residents.
- Broadhead WE, Gehlbach SH, de Gruy FV, Kaplan BH. The Duke-UNC functional social support questionnaire: Measurement of social support in family medicine patients. *Medical Care*. 1988; 26(7):709–723. [PubMed: 3393031]
- Burns BJ, Costello EJ, Angold A, Tweed D, Stangl D, Farmer EMZ, et al. Children's mental health service use across service sectors. *Health Affairs*. 1995; 14(3):147–159. [PubMed: 7498888]
- Burns, BJ.; Angold, A.; Magruder-Habib, K.; Costello, EJ.; Patrick, MK. Developmental Epidemiology Program, Department of Psychiatry and Behavioral Sciences. Duke University Medical Center; 1996. The child and adolescent services assessment (CASA) parent interview.
- Burns BJ, Phillips SD, Wagner HR, Barth RP, Kolko DJ, Campbell Y, et al. Mental health need and access to mental health services by youths involved with Child Welfare: A national survey. *Journal of the American Academy of Child and Adolescent Psychiatry*. 2004; 43(8):960–970. [PubMed: 15266190]
- Bussing R, Zima BT, Gary FA, Mason DM, Leon CE, Sinha K, et al. Social networks, caregiver strain, and utilization of mental health services among elementary school students at high risk for ADHD. *Journal of the American Academy of Child and Adolescent Psychiatry*. 2003; 42(7):842–850. [PubMed: 12819444]

- Catalano R, Rook K, Dooley D. Labor markets and help-seeking: A test of the employment security hypothesis. *Journal of Health and Social Behavior*. 1986; 27:277–287. [PubMed: 3772064]
- Coohey C. Child maltreatment: Testing the social isolation hypothesis. *Child Abuse and Neglect*. 1996; 20(3):241–254. [PubMed: 8734555]
- Costello EJ, Pescosolido BA, Angold A, Burns BJ. A family network-based model of access to child mental health services. *Research in Community and Mental Health*. 1998; 9:165–190.
- Dixon MA. Families of adolescent clients and nonclients: Their environments and help-seeking behaviors. *Advances in Nursing Science*. 1986; 8:75–88. [PubMed: 3079987]
- Garalda ME, Bailey D. Child and family factors associated with referral to child psychiatrists. *British Journal of Psychiatry*. 1988; 153:81–99. [PubMed: 3224255]
- Golding JM, Wells KB. Social support and use of mental health services by Mexican Americans and non-Hispanic Whites. *Basic and Applied Social Psychology*. 1990; 11(4):443–458.
- Gourash N. Help-seeking: A review of the literature. *American Journal of Community Psychology*. 1978; 6:413–423. [PubMed: 727182]
- Harrison ME, McKay MM, Bannon WM Jr. Inner-city child mental health service use: The real question is why youth and families do not use services. *Community Mental Health Journal*. 2004; 40(2):119–131. [PubMed: 15206637]
- John LH, Offord DR, Boyle MH, Racine YA. Factors predicting use of mental health and social services by children 6–16 years old: Findings from the Ontario Child Health Study. *American Journal of Orthopsychiatry*. 1995; 65(1):76–86. [PubMed: 7733219]
- Kadushin C. The friends and supporters of psychotherapy: On social circles in urban life. *American Social Review*. 1966; 31:786.
- Kataoka S, Zhang L, Wells K. Unmet need for mental health care among U. S. children: Variation by ethnicity and insurance status. *American Journal of Psychiatry*. 2002; 159:1548–1555. [PubMed: 12202276]
- Kleinbaum, DG.; Kupper, LL.; Muller, KE.; Nizam, A. *Applied regression analysis and other multivariate methods*. 3rd ed.. Pacific Grove, CA: Brooks/Cole; 1998.
- Leslie LK, Hurlburt MS, James S, Landsverk J, Slymen DJ, Zhang J. Relationship between entry into child welfare and mental health service use. *Psychiatric Services*. 2005; 56:981–987. [PubMed: 16088016]
- McMiller WP, Weisz JR. Help-seeking preceding mental health clinic intake among African-American, Latino, and Caucasian youths. *Journal of the American Academy of Child & Adolescent Psychiatry*. 1996; 35:1086–1094. [PubMed: 8755806]
- Miville ML, Constantine MG. Sociocultural predictors of psychological help-seeking attitudes and behavior among Mexican American college students. *Cultural Diversity & Ethnic Minority Psychology*. 2006; 12(3):420–432. [PubMed: 16881747]
- Morrisey-Kane E, Prinz RJ. Engagement in child and adolescent treatment: The role of parental cognitions and attributions. *Clinical Child & Family Psychology Review*. 1999; 2:183–198. [PubMed: 11227074]
- Padgett DK, Patrick C, Burns BJ, Schlesinger HJ, Cohen J. The effect of insurance benefit changes on use of child and adolescent outpatient mental health services. *Medical Care*. 1993; 31(2):96–110. [PubMed: 8433582]
- Pescosolido BA. Beyond rational choice: The social dynamics of how people seek help. *American Journal of Sociology*. 1992; 97:1096–1138.
- Pescosolido BA, Wright ER, Alegria M, Vera M. Social networks and patterns of use among the poor with mental health problems in Puerto Rico. *Medical Care*. 1998; 36(7):1057–1072. [PubMed: 9674623]
- Sarason IG, Levine HM, Basham RB, Sarason BR. Assessing social support: The social support questionnaire. *Journal of Personality & Social Psychology*. 1983; 44(1):127–139.
- Sarason IG, Sarason BR, Shearin EN, Pierce GR. A brief measure of social support: Practical and theoretical implications. *Journal of Social and Personal Relationships*. 1987; 4(4):497–510.
- Sherbourne CD. The role of social support and life stress events in use of mental health services. *Social Science & Medicine*. 1988; 27:1393–1400. [PubMed: 3238458]

- Snowden LR. Barriers to effective mental health services for African Americans. *Mental Health Services Research*. 2001; 3(4):181–187. [PubMed: 11859964]
- Stata Corp. *Stata Statistical Software: Release 9.2*. College Station, TX: Stata Corp LP; 2005.
- Surtees PG. Social support, residual adversity, and depressive outcome. *Social Psychiatry and Psychiatric Epidemiology*. 1980; 15(2):71–80.
- Taussig HN. Risk behaviors in maltreated youth placed in foster care: a longitudinal study of protective and vulnerability factors. *Child Abuse & Neglect*. 2002; 26:1179–1999. [PubMed: 12398855]
- Thompson R, Lindsey MA, English DJ, Hawley KM, Lambert S, Browne DC. The influence of family environment on mental health need and service use among vulnerable children. *Child Welfare*. 2007; 86(5):57–74. [PubMed: 18422048]
- U. S. Department of Health and Human Services. *Mental Health: Culture, Race, Ethnicity, Supplement to Mental Health: Report of the Surgeon General*. Washington, DC: Department of Health and Human Services; 2001.
- Wells KB, Manning WM Jr, Benjamin B. A comparison of the effects of sociodemographic factors and health status on use of outpatient mental health services in HMO and fee-for-service plans. *Medical Care*. 1986; 24(10):949–960. [PubMed: 3762243]
- Wells KB, Manning WM Jr, Duan N, Newhouse JP, Ware JE Jr. Sociodemographic factors and the use of outpatient mental health services. *Medical Care*. 1986; 24(1):75–85. [PubMed: 3945131]
- Woodward AM, Dwinell AD, Arons BS. Barriers to mental health care for Hispanic Americans: A literature review and discussion. *Journal of Mental Health Administration*. 1992; 19:224–236. [PubMed: 10128770]
- Yeh M, McCabe K, Hough R, Dupuis D, Hazen A. Racial/ethnic differences in parental endorsement of barriers to mental health services for youth. *Mental Health Services Research*. 2003; 5:65–77. [PubMed: 12801070]

Figure 1.

Mediation model

Note. Control Variables ♦ Youth Age, Youth Gender, Parental Education, Family Income

Figure 2.
Predicted probability of receiving MH services as a function of parents' network size and race/ethnicity

Figure 3.
Predicted probability of receiving MH services as a function of parents' network size and parents' education level

Table 1

Sample Characteristics

	Non-Hispanic White n=812 (53.5%)	African American n=418 (27.5%)	Hispanic n=289 (19.0%)	Total (N=1519)
Youth Gender				
Female	420 (51.7%)	219 (52.4%)	159 (55.0%)	798 (52.5%)
Mean Youth Age (SD)	8.97 (3.30)	9.04 (3.15)	8.64 (3.15)	8.93 (3.23)
Parent Education				
No HS diploma	196 (24.1%)	131 (31.3%)	115 (39.8%)	442 (29.1%)
HS diploma	388 (47.8%)	181 (43.3%)	110 (38.1%)	679 (44.7%)
Some college	228 (28.1%)	106 (25.4%)	64 (22.1%)	398 (26.2%)
Family Income				
Below FPL	250 (30.8%)	203 (48.6%)	132 (45.7%)	585 (38.5%)
Between 100%–200% FPL	339 (41.7%)	145 (34.7%)	103 (35.6%)	587 (38.6%)
Above 200% FPL	223 (27.5%)	70 (16.7%)	54 (18.7%)	347 (22.8%)
Mean CBCL (SD)	59.97 (11.82)	58.02 (11.99)	56.83 (12.68)	58.83 (12.10)
Social Network				
Mean Social Support (SD)	3.36 (.52)	3.40 (.55)	3.33 (.68)	3.37 (.56)
Mean Network Size (SD)	2.81 (3.11)	2.80 (2.71)	2.60 (2.49)	2.77 (2.89)

Note. FPL = Federal Poverty Level

Table 2

Sample Characteristics and MH Service Use

	Weighted % of Youth Using MH services
Race/Ethnicity	
Non-Hispanic White	22.1%
African American	11.0%
Hispanic	12.3%
Parent Education	
No HS diploma	15.2%
HS diploma	14.2%
Some college	23.1%
Family Income	
Below FPL	16.6%
Between 100%–200% FPL	19.7%
Above 200% FPL	13.9%
Total	22.4%

Note. FPL = Federal Poverty Level

Table 3
The effect of MH status on the relationship between perceived support and MH service use.

Variable	Model 1		Model 2		Standardized % Change OR
	OR	95% CI	OR	95% CI	
Youth Age	1.15 ***	1.06–1.24	1.12 *	1.03–1.22	
Youth Female ^a	0.62 **	0.44–0.88	0.68	0.45–1.02	
Parental Education					
HS diploma ^b	0.94	0.55–1.60	1.22	0.66–2.25	
Some college ^b	1.61	0.85–3.06	2.02	0.99–4.09	
Family Income					
Between 100%–200% FPL	1.15	0.56–2.36	1.13	0.49–2.60	
Above 200% FPL	0.69	0.38–1.25	0.82	0.42–1.60	
Perceived Social Support	0.67 *	0.46–0.98	0.82	0.53–1.29	24.8%
CBCL			1.09 ***	1.06–1.13	

Note. FPL = Federal Poverty Level

$p < .06$;

* $p < .05$;

** $p < .01$;

*** $p < .001$

^a Male as reference group

^b No HS diploma as reference group

^c Family income below FPL as reference group

Table 4

The effect of moderator variables (race/ethnicity, family income, parental education) on the relationship between social support and MH service use

	Social Support Model			Network Size Model		
	Variable	OR	95% CI	OR	95% CI	
Step 1	Youth Age	1.13**	1.03–1.23	1.13**	1.03–1.23	
	Youth Female ^a	.68	0.45–1.03	0.69	0.46–1.04	
	Parental Education					
	HS diploma ^b	1.22	0.67–2.24	1.33	0.71–2.48	
	Some College ^b	2.00	0.99–4.02	2.36*	1.16–4.80	
	Family Income					
	Between 100%–200% FPL ^c	.88	0.36–2.18	0.91	0.36–2.26	
	Above 200% FPL ^c	.63	0.31–1.28	0.66	0.32–1.37	
	Race/Ethnicity					
	African American ^d	.38*	0.17–.85	0.37*	0.16–0.83	
Step 2	Hispanic ^d	.58	0.24–1.41	0.59	0.24–1.42	
	CBCL	1.09***	1.06–1.12	1.10***	1.06–1.13	
	Social Network	.84	0.54–1.31	0.88	0.76–1.02	
Step 2	R/E	1.10	0.32–3.75	1.16	0.83–1.62	
	African American X Social Network					
	Interactions					
	Hispanic X Social Network	0.90	0.25–3.17	1.47*	0.99–2.16	
Step 2	Income	1.09	0.39–3.04	0.83	0.65–1.05	
	100%–200% FPL X Social Network					
	Interactions					
	Above 200% FPL X Social Network	0.61	0.16–2.34	0.76	0.52–1.11	
Step 2	Education	0.50	0.21–1.24	0.81	0.51–1.30	
	HS graduate X Social Network					
	Interactions					
	Some College X Social Network	0.35	0.12–1.05	0.74*	0.56–.99	

Note. FPL = Federal Poverty Level. Odds Ratios reported at each step are only for those variables added at that step; the three sets of moderator variables were never added together.

Author Manuscript

Author Manuscript

Author Manuscript

Author Manuscript

$p<.06$;
* $p<.05$;
** $p<.01$;
*** $p<.001$.
^a Male as reference group
^b Less than HS education as reference group
^c Below FPL as reference group
^d Non-Hispanic White as reference group