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Social Network Influences on Service Use among Urban, African American Youth with Mental Health Problems

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Abstract

Objective—To examine the associations between the size and quality of African American adolescents' social networks and their mental health service use, and to examine whether these social networks characteristics moderate the association between need for services due to emotional or behavioral difficulties and use of services.

Method—Participants were a community sample of African American adolescents (N=465; 46.2% female; mean age 14.78) initially recruited in 1st grade for participation in an evaluation of two preventive intervention trials. Social network influences and adolescents' mental health service use in schools and the community were accessed.

Results—A significant positive association between adolescents' perception that their social network was helpful and their use of school mental health services was identified. The significant associations between need for services for anxiety, depression, or behavior problems, and school and outpatient service use were moderated by size of the social network. Specifically, among youth in need of services for anxiety or depression, school-based service use was higher for those with larger social networks.

Conclusions—Implications for enhancing access to formal mental health services include further examination of key social network influences that potentially serve as facilitators or barriers to formal help-seeking. The findings also suggest that it might be important to integrate social network members into interventions to address the mental health needs of adolescents.

Keywords

Social networks; mental health; service use; urban youth; African American youth

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African American adolescents, especially those residing in urban, low-income environments, are more likely to suffer from untreated mental health problems than their counterparts in the general population.¹⁻³ These youth generally experience an increased risk of mental illness because of characteristics of urban environments, including community violence, criminal and gang activity, drug use, and poverty,^{4, 5} which negatively affect their mental health functioning.⁶ Although urban, African American youth are more likely to experience significant psychosocial stressors and experience mental health difficulties that warrant services,⁷ they are least likely to receive community-based, lower intensity (i.e., non-emergency related) services.⁸ Approximately 50-75% of urban youth needing mental health treatment do not receive care, and of those who do, many prematurely end treatment.⁹ The public health and developmental implications of untreated mental health problems may include poor school performance, violence, and other forms of delinquency.^{10, 11} Lack of treatment also may result in escalation of symptoms, such as the progression of depression into suicidal behavior,¹² as well as increased risk of contact with juvenile justice systems.¹³

Previous studies of African American youth's underutilization of community-based mental health services have identified economic barriers and preference to explain this phenomenon.¹⁴ Urban African American children are more likely to lack health insurance and the out-of-pocket costs of mental health may be a significant obstacle to treatment. Family preferences and attitudes toward mental health services also play a role in underutilization of services. Over two-thirds of the parents of minority youth did not seek help from professionals and agencies as their first choice, suggesting greater reluctance and fewer positive attitudes than Caucasians.¹⁵

Help-Seeking Behaviors: Influence of Social Networks

The role of the social network is critical in understanding the help-seeking process of adolescents with mental health problems because pathways into mental health treatment are shaped not only by the type of problem experienced, but also by the support provided by social network members.¹⁶ Social networks can facilitate entrée into service use for the affected individual, or delay/deter formal service use altogether.¹⁷

Informal help (i.e., support from family members, friends) may be the first point of contact for adolescents experiencing emotional and psychological problems.¹⁸ A study of help-seeking behaviors among African American youth with depressive symptoms found that these youth often discussed their problems with their family exclusively, and received messages consistent with not talking to “outsiders” about their mental health problems.¹⁹

Pescosolido's *Network-Episode Model (NEM)*¹⁶ suggests that decisions to seek care are contingent upon individuals' sociocultural beliefs regarding a particular illness, as well as their sociocultural attitudes and perceptions of health care institutions and providers. Social networks (i.e., family members, friends) moderate these beliefs, and may further influence when, how, and whether individuals receive mental health care. The NEM purports the *structure* (i.e., network size, frequency of contact, density), *function* (i.e., type of support given), and *content* (i.e., messages transmitted regarding mental illness or care) of social networks help to explain help-seeking behaviors of individuals in need of mental health treatment.

Using the NEM to Unlock Social Network Influences

The NEM has been used to examine the relationship between social network influences and adult mental health services utilization. Specifically, individuals with larger networks were more likely to report coercive entry into treatment, rather than self-selection,²⁰ and were less likely to use formal services.²¹ In addition to its association with lower service use, a larger

network size has also been found to be indicative of a more dense and supportive network.^{21, 22} Research among ethnic minority groups found that social networks (consisting of family, friends or ministers) were consulted along with formal mental health professionals. In situations absent of social networks, formal mental health care use increased for African American adults.²³ Snowden, however, found that African American adults turned to significant others in the community in lieu of professionals when dealing with mental health difficulties.²⁴

Additional research examining social network influences among African American adolescents has focused on the *content* of social networks, for example positive or negative valence regarding perceptions of formal services and providers.¹⁹ In a study examining mental health service use by an ethnically-diverse sample of adolescents, boys experienced a stronger fear of negative reprisal from peers than did girls;²⁵ which may have led to their preference to address their mental health struggles with their families. Relatedly, a recent study by Moses suggests that adolescents anticipate negative appraisal from peers regarding formal service use, but indicate that families provide emotional support regarding service use.²⁶ Earlier social network research among African American adolescents found that both genders prefer parents for material aid and peers for emotional aid.²⁷ Information regarding other social network factors (e.g. size and perceptions of support) influencing help-seeking and service use for this population remains limited, but once discerned may provide additional clues as to their disparity in community-based service use.

School-Based Mental Health Service Use

Because the school-based sector is now the largest provider of mental health services to youth in the U.S.,²⁸ it is important to examine factors influencing help-seeking and service use among adolescents in this environment. The effectiveness of school-based mental health programs has been well-documented.²⁸ These programs enhance access to services,²⁹ reduce stigma of seeking help from formal sources,³⁰ promote generalization and maintenance of treatment gains,³¹ and promote a natural, ecologically grounded approach to helping children and families.²⁹

Despite the availability of mental health services in a youth's school and community setting, access to care for some mental health problems (e.g., ADHD, depression) remains a problem.^{2, 30} Several identified obstacles are logistical barriers (e.g., lack of transportation, scheduling and child care conflicts), perceptions of child mental health problems (e.g., denial of problem severity, belief that problems can be addressed without treatment), and perceptions of mental health services (e.g., mistrust of service providers, stigma regarding mental illness).^{19, 32, 33} These barriers to mental health service use may be particularly pronounced for African American youth in need of mental health treatment and their families.³³ Yet, few studies have examined how social networks, particularly family members, influence adolescents' use of mental health services.

Our current study builds upon the existing mental health services research literature by examining social network influences on mental health need and service utilization among African American adolescents. In particular, the authors of this study examined whether social network factors, including network size and perceptions of network support, influence mental health service use among African American adolescents with an identified internalizing and externalizing need. Based on prior studies applying the NEM, it was hypothesized that larger social networks (and networks perceived to provide help and emotional aid) would be associated with a decreased use of mental health services (i.e., school and community-based services), even for youth in need of such services.

Method

Participants and Procedure

Participants were 465 students initially assessed in the fall of 1st grade as part of an evaluation of two universal school-based preventive interventions whose immediate targets were early learning and aggressive behavior.¹¹ Of the 678 children who participated in the intervention trial in 1st grade, 585 were African American. Of these 585 children, approximately 80% ($N = 465$) had written parental consent and provided verbal assent for the 9th grade assessments. At the larger face-to-face interview at the 9th grade assessment, youth reported about their social support network, parents reported about their child's service use, and teachers reported each participating student's need for mental health services. At the time of this study, both school-based and nearby community-based mental health services were available to youth at the participating schools. Procedures for this study were approved by the Johns Hopkins University Committee on Human Research (CHR #: H.33.02.06.07.A1).

Almost half of the sample was female ($N = 215$; 46.2%) and 71.9% of the sample received free lunch or reduced lunches at the 1st grade assessment. At the 9th grade assessment, youth ranged in age from 14.17 to 16.56 ($M = 14.78$, $SD = .35$). There were no differences in gender, percentage receiving free or reduced lunch, intervention status, age, 1st grade self-reports of anxiety or depressive symptoms, or teacher ratings of 1st grade externalizing problems between the 465 African American students included in the analyses described below and the 120 African American participants lost to follow-up. Reasons for loss to follow-up included parent/youth refusal (52%), inability to locate (42%), incarceration (4%), or death (2%).

Measures

Mental Health Service Utilization—Adolescents' current outpatient and school mental health service use was assessed using the Services Assessment for Children and Adolescents (SACA) Parent Report, a structured interview designed to assess children's current and past mental health service utilization, including use of inpatient, outpatient, and school-based mental health services.³⁴ The validity ($\kappa = 0.76$) and the test-retest reliability of lifetime ($\kappa = 0.82$ – 0.94) and 12-month ($\kappa = 0.75$ – 0.86) service use are strong; interrater reliability between parent and child reports of service use ($\kappa = 0.43$ – 0.86) is fair to excellent.³⁴

Perceived Need for Services—Teachers reported their perceptions of youth need for services for internalizing (i.e., anxiety, depression) and externalizing (i.e., conduct problems) problems using a modified SACA Parent Report.³⁴ Teachers were asked, “Does the child need treatment or counseling for behavioral or conduct problems?” and “Does the child need treatment or counseling for anxiety or depression?” Teacher responses were dichotomous (yes or no).

Social Support Network—Youth perceptions of social network support were assessed using the My Family and Friends scale, a self-report instrument that includes perceptions of the availability of social network support and satisfaction with support received for different categories of support, including instrumental, informational, and self-esteem enhancing support.³⁵ In the present study, youth reported the size of their social network (up to a maximum of 9 network members) and rated instrumental (i.e., how helpful) and emotional (i.e., makes you feel good about yourself) support received from social network members using a 4-point Likert scale ranging from 1 (“not at all”) to 4 (“a lot”). In the standardization sample, the mean coefficient alpha for ratings of support was .72. For the study sample, the mean coefficient alpha was .65.

Demographic Information and Intervention Status—Information was collected on participants' age, gender, and receipt of free or reduced lunch. Intervention status (i.e., participation in an intervention or control condition during first grade) also was recorded.

Data Analyses

Demographic characteristics, including gender differences in network characteristics and service use were analyzed using t-tests and Chi square tests to determine statistically significant mean differences;. Correlations were computed to assess bivariate relationships among each of the study variables. Analyses of covariance (ANCOVAs) were performed to examine whether social network characteristics moderated the association between youth need for services and service utilization. For these analyses, perceived need for services for internalizing problems and externalizing problems were examined as fixed effects in separate models.

Given the large correlations between social support network size and the positive network attributes ($r=.89, p<.001$), and consistent with previous social network literature,^{21, 22} only size of social network was examined as a moderator. Further, given previous research among African American adults indicating that larger social network size is associated with receipt of assistance from informal network members regarding psychosocial matters,²³ we were interested in examining whether social network size posited a similar influence among this sample of African American youth. Thus, the network size variable was included as a fixed effect in the ANCOVAs. Interactions between need for services and the network size variable were included in the ANCOVA models. Outpatient service utilization and school mental health service utilization were examined separately, resulting in four ANCOVA models. In each analysis, gender and intervention status were controlled. ANCOVA results are presented in Tables 3 and 4. Analyses were performed using SPSS version 16.

Results

Preliminary Analyses

Means and frequencies of study variables are summarized in Table 1. Participants reported network sizes ranging from one to nine members; no significant differences in network size by gender were found.

Parents reported about 6% of the sample currently used outpatient mental health services, with 4% of the sample receiving school mental health services. School mental health service use was significantly higher for males (6%) than females (1%; $\chi^2 = 5.80, p < .05$). Only 1.1% of the sample was concurrently using outpatient and school mental health services. Teachers assessed males as having higher need for services for internalizing problems (24% vs. 13%; $\chi^2 = 9.09, p < .01$) and externalizing problems (36% vs. 22%; $\chi^2 = 11.02, p < .01$). See Table 2 for bivariate associations.

Need for Services, and Types of Service Use

The ANCOVAs examining the interactions between need for services and social network size revealed a significant positive main effect of perceived need for both service types (i.e., outpatient and school-based service use). In all models, youths whose teachers perceived a need for services for internalizing and externalizing problems were significantly more likely to have used outpatient and school-based services in the 9th grade. The models also revealed a significant positive effect produced by the intervention. Specifically, youths who participated in the intervention in 1st grade were significantly more likely to use outpatient services in 9th grade.

For outpatient service use, there were significant main effects for intervention status and mental health need. There was, however, no significant interaction between the need variables and the network size for outpatient service use. For school-based service use, only the main effect of perceived need for internalizing problems was indicated by a significant interaction between teacher perception of need for services for internalizing problems and social network size ($F = 2.83, p < .05$). Specifically, among youths whose teachers perceived a need for internalizing services, those with larger social networks were significantly more likely to be participating in school services (see Figure 1). While there were no other significant interactions regarding school-based service use, there was a trend in the interaction between need for externalizing services and network size ($F = 1.90, p = .06$).

Discussion

This study builds upon the extant literature regarding social network influences and service use by identifying patterns of network influence among urban African American adolescents. Our findings indicate that mental health need is directly related to service use for both school and community-based services. Need for services, exceeded service use for both service types. While almost half the sample had teacher-identified need, only 20% of those youth received mental health care. This is consistent with other studies that suggest that the majority of youth in need of services do not receive them.^{2, 8} The strongest relationship between need and service use was for youths with externalizing need. Thompson & May similarly found that youth with externalizing behaviors were likely to have greater contact with mental health services than youth with “quieter” internalizing problems (e.g. depression, anxiety).³⁶

Interestingly, the ANCOVA models for both internalizing and externalizing need revealed a significant positive effect of the 1st grade intervention regarding outpatient service use in the 9th grade. Given their participation in the intervention condition and the associated positive experiences (i.e., early identification of mental health needs, referral to community-based/school mental health services), this finding suggests a potential positive impact of participation in the 1st grade intervention, even beyond that of the positive mental health outcomes reported for the participating youth in an earlier study.¹¹

African American adolescents with larger social networks were more likely to use school mental health services for an internalizing need. The greater the level of internalizing need, the stronger the effect the large social network had on use of school mental health services. Additionally, adolescents with internalizing needs who reported having a large network also reported that their social networks (mostly family members) were helpful and made them feel good about themselves.

Our finding that larger network size was associated with more school service use for youth with an internalizing need was unexpected given previous research that indicated a large social network size inhibited service use.^{21, 22} Despite the prior research that suggests peer stigmatization may inhibit service use,^{25, 26} our findings may suggest that the perceived support available through a large social network perhaps promotes positive engagement in school-based services for an internalizing mental health need, buffering any potential negative effects of perceived peer influences.

Another explanation might be that schools represent a best service use option for families who face logistical barriers to receiving services in other locations. Given the greater accessibility and flexibility of school mental health services, schools may be the preferred treatment setting for the families of youth with higher network size. Rates of follow through from mental health referrals has been found to be more than six times higher for schools than community based services.³⁷ Perception of problem severity has also been found to be related to follow through

on referrals and requires further investigation to assess how perception of need determines the setting where youth might receive treatment.³⁷

We surprisingly found that males had more teacher-identified need than females, even for internalizing behaviors. Prior research has found that African American boys with internalizing need (e.g. depression) tend to mask their symptoms based upon culturally accepted ways of expressing these behaviors.¹⁹ These findings suggest that the co-location of school personnel in the natural ecologies where problem behaviors occur might allow these professionals to be better at identifying less observable forms of disturbance, such as depression and anxiety.

Our findings should be considered within the limitations of this study. First, the cross-sectional design does not permit conclusions about the direction of association between social network characteristics and service use. An alternative explanation of our findings might be that social networks were mobilized after mental health need was recognized. Regardless, networks still may facilitate or delay/deter service use. A longitudinal design might better explain how social networks affect adolescents over the course of the specific illness' trajectory.

Second, these analyses relied upon teachers' perceptions of mental health needs, rather than caregivers' or the adolescent's own reports. Reported problem behavior has been found to differ by respondent.³⁸ In terms of school-related behaviors, however, research has found teachers' reports to be a viable assessment of need.³⁹

Third, our examination of social network influences focused exclusively on two constructs associated with the NEM: structure and size of network, as measured by the My Family and Friends scale.³⁵ The coefficient alpha for the scale was not ideal ($\alpha = .65$), and more information could have proven helpful. For example, the messages conveyed by network members to adolescents with identified mental health needs would provide further insight into service use. Additionally, we were unable to determine the closeness of these network ties. That is, adolescents who did not access services may have been counseled by "close" network members against seeking help outside of the network

Finally, we focused on a finite set of variables that may limit formal service use, i.e., social network influences. Elsewhere, type of disorder (e.g., depressive versus disruptive), inability to determine problem severity or reluctance to cooperate in treatment were identified as barriers to formal mental health service use among adolescents.⁴⁰ Although previous findings among African American adults suggest that some social network processes deter/delay entrée into services,^{23, 24} our findings provide significant data (albeit with small to moderate effect sizes) regarding the potential effects of the social support system on adolescents who are experiencing emotional/psychological distress.

Limitations notwithstanding, this study provides important insights into the association between social network characteristics and African American adolescents' use of mental health services. Given our results, community- and school-based mental health practitioners should pay careful attention to incorporating social networks as potential facilitators to service use among African American adolescents with mental health needs. Moreover, further examination of specific social network characteristics (e.g., closeness of ties, network messages, attitudes, and norms regarding professional mental health treatment for adolescents in need) might identify processes that influence help-seeking behaviors for adolescents. Once understood, these processes can inform the development of social network-based interventions that not only target treatment engagement and retention, but also target core service use constructs such as satisfaction and perceived relevance of services for this population.

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Internalizing Need and School Service Use

Figure 1.
Interaction between Need for Internalizing Services and Size of Social Network for School Service Use

Table 1
Means and Standard Deviations of Study Variables for Total Sample and By Gender

Variable	Total Sample				Males		Females		t-test/Chi square ^a
	Mean	(SD)	Range	Maximum	Range	M	(SD)	M	
Social network size	4.79	4.80	1-9	0-9		4.71	6.32	4.88	1.87
Social Network - Instrumental Support	14.16	6.53	0-35	0-36		13.16	6.88	15.31	5.93
Social Network - Emotional Support	15.77	7.18	0-36	0-36		14.54	7.26	17.20	6.83
Need services-internalizing ^a	.19	.39	0-1	0-1		.24	.43	.13	.33
Need services-externalizing ^a	.29	.46	0-1	0-1		.36	.48	.22	.41
Outpatient service use ^a	.06	.23	0-1	0-1		.05	.22	.05	.24
School service use ^a	.04	.19	0-1	0-1		.06	.23	.01	.12
									5.80*

^a Dichotomous variables; means represent proportion of sample.

* $p < .05$.

** $p < .01$.

Table 2

Correlations among Study Variables

	Network Helpfulness	Network Makes Me Feel Good	TOCA – Int	TOCA – Ext	Service Use – School	Service Use – Community
Network Size	.898**	.926**	.112**	.058	-.049	-.032
Network Helpfulness		.933**	-.062	-.087*	-.115*	-.062
Network Makes Me Feel Good			-.076	-.109*	-.109*	-.067
TOCA – Int				.496**	.084	.074
TOCA – Ext					.121**	.057
Service Use – School						.482**

** Correlation is significant at the 0.01 level (2-tailed).

* Correlation is significant at the 0.05 level (2-tailed).

Table 3
ANCOVAs for Network Size and Need Service for Internalizing Behavior with Outpatient and School Service Use Outcomes

Source	Dependent Variable: Outpatient Service Use					Dependent Variable: School Service Use				
	Sum of Squares	df	Mean Square	F	Partial η^2	Sum of Squares	Df	Mean Square	F	Partial η^2
Gender	.01	1	.01	.23	.001	.11	1	.11	3.13 ⁺	.01
Intervention Status	.44	1	.44	8.25 ^{**}	.02	.04	1	.04	1.00	.003
Network Size	.46	8	.06	1.08	.02	.62	8	.08	2.11 [*]	.04
Need for Internalizing Services	.33	1	.33	6.29 [*]	.02	.49	1	.49	13.45 ^{***}	.03
Network Size $\times$ Need Internalizing Services	.32	8	.04	.75	.02	.83	8	.10	2.83 ^{**}	.05
Error	20.90	396	.05			14.41	396	.04		

⁺ $p > .05$.

^{*} $p < .05$.

^{**} $p < .01$.

^{***} $p < .001$.

Table 3
ANCOVA for Network Size and Need Service for Externalizing Behavior with Outpatient and School Service Use Outcomes

Source	Dependent Variable: Outpatient Service Use					Dependent Variable: School Service Use				
	Sum of Squares	df	Mean Square	F	Partial η^2	Sum of Squares	Df	Mean Square	F	Partial η^2
Gender	.01	1	.01	.23	.001	.11	1	.11	3.05 ⁺	.01
Intervention Status	.49	1	.49	9.40 ^{**}	.02	.06	1	.06	1.72	.004
Network Size	.48	8	.06	1.16	.02	.48	8	.06	1.64	.03
Need for Externalizing Services	.40	1	.40	7.70 [*]	.02	.98	1	.98	27.02 ^{***}	.06
Network Size $\times$ Need Externalizing Services	.50	8	.06	1.20	.02	.56	8	.07	1.90 ⁺	.04
Error	20.54	396	.05			14.43	396	.04		

⁺ $p > .05$.
^{*} $p < .05$.
^{**} $p < .01$.
^{***} $p < .001$.