Social Support and Social Network Profiles among Women on Methadone

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We examined the network profiles and social supports of 151 women on methadone, exploring to whom women turn for different types of support and how flow of support is associated with the network member's personal and relational characteristics and network structure. Women reported a total of 795 network members, with an average network size of 5.9 individuals. The networks were long-term, ethnically homogeneous, and of high density. Support within personal networks is contingent on the types of support required, the relational characteristics, and the network structures. Findings from this study may be useful in helping practitioners and program developers to better comprehend the social milieu of drug users, particularly women enrolled in methadone treatment programs.

The concept of social support has become an increasingly popular focus of attention for both researchers and practitioners of social work. Recognizable in Mary Richmond's early writings (1917–22), social support approaches have been employed in the assessment of and interventions with various client populations.[1] The addiction literature suggests that social support can both discourage and promote substance abuse. In its positive role, social support is associated with commitment to and maintenance of behavioral change and successful alcohol and drug treatment

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outcomes.[2] Social support is also associated with lower rates of drug initiation, use of illicit drugs, relapses, and high-risk drug use.[3]

Studies have also examined the negative role of social support. Social support has been found to increase the likelihood of relapse and to reinforce maladaptive behavior.[4] Recent studies have also suggested that risk-taking behaviors are associated with the composition of personal networks.[5] Among heroin users, participation in "shooting galleries" is positively associated with the size of an individual's emotionally supportive network and negatively associated with the size of his or her material aid network.[6]

Social support is a complex phenomenon that has been conceptualized in terms of either functional or structural properties, or both. For example, the functional domain encompasses the availability of support and the quantity of support to which people have access.[7] It also includes enactment of support, or the actual use of different types of support.[8] It covers quality of support, that is, the person's satisfaction with available or received support and reciprocity of support, both giving and receiving support.[9] The functional domain includes negative or positive support and content, or types of support.[10] Sidney Cobb defines social support as information that prompts the individual to believe that he or she is cared for, loved, esteemed, valued, and a member of a network of common and mutual obligation.[11] Gerald Caplan characterizes social support in a similarly functional manner, suggesting that it improves adaptive competence through emotional mastery, guidance, and feedback.[12] Many studies have shown social support to be associated with increased health, happiness, and longevity.[13]

Structural aspects of social support are often described in terms of social network characteristics that include either the links between different people and a single individual or to the total set of links among all the members of a particular population.[14] Social networks are usually characterized by a variety of indicators, including relational properties (frequency of contacts, proximity, multiplicity, homogeneity, closeness, etc.) and network structures (size and density).

Theoretical Underpinnings

The hierarchical-compensatory model and the task-specific model are two theoretical frameworks used by sociologists to explain why and how different people provide different kinds of supports and to identify who specializes in which kind of support.[15] The hierarchical-compensatory model suggests that, regardless of type of support, social support is provided in a hierarchical, descending order beginning with the spouse, then kin, friends and neighbors, and, finally, formal organizations. The choice of whom to ask for support follows an ordered preference according to the degree of intimacy of the relationship between the receiver

and the giver. This approach does not focus on the nature of the task, the relational characteristics, or the network structure.

The task-specific model of Eugene Litwak and his colleagues suggests that flow of support depends on the match between characteristics of particular tasks and the characteristics of the social groups that match those tasks.[16] Characteristics of social groups in this model include several functional dimensions: proximity, length of commitment, and similarity of lifestyle among members of the group, as well as the group's size, sources of motivation, division of labor, and level of technical knowledge.[17] Unlike the compensatory model, which emphasizes the specific order of preference for support groups, the task-specific model deemphasizes this constraint and holds that people turn to certain groups for support depending on how well the features of those social groups match the characteristics of the tasks for which support is needed.

Both models focus on the association between support giving and certain social roles (such as those of spouse, sibling, neighbor, or friend); the task-specific model adds the importance of the characteristics of social roles in explaining who will provide what kinds of supports. Neither model has examined the independent effect of social roles on the flow of social support while controlling for the effect of relational properties and network structures. For example, an individual may seek emotional support from a sibling only when she or he has a strong tie with her or him. Similarly, this individual might turn to a friend for shelter assistance only when she or he has no other connection with other members in the personal network. Furthermore, although both models have been tested with elderly people, neither has been applied with drug users.

Some researchers have expanded their understanding of the flow of resources by examining how support is affected by social networks rather than focusing on personal transactions and social roles.[18] Influenced by symbolic interaction theory and action theory, network models emphasize that an individual's evaluations of alternative actions are significantly affected by the social context in which they are made.[19] Human actions not only are determined by social roles but are also constrained by the relational characteristics and network structures in which an individual is embedded, and by the knowledge of social context.[20] Relational characteristics and network structural profiles can predict type and availability of social support.[21] Network density, or the ratio of close relationships among contacts to the number of all such possible relationships, has been found to be related to the network's ability to mobilize support for the focal person as well as to enhance social integration within the network.[22] Such integration facilitates coordination and, therefore, enhances the provision of support from network members.[23] In some studies, the effect of density appeared to depend on the kinds of support provided.[24] High-density networks (predominantly kin) tend to be associated with the provision of extensive services, such as emergency or

chronic health care. Low-density networks (predominantly friends) provide companionship.

Studies have shown that the larger the network size, the greater the number of network members who provide all types of support (emotional aid, goods, services, and companionship), especially for women.[25] Furthermore, the higher the degree of reciprocity among network members, the higher the probability that social support will be available.[26] Homogeneity of network members may enhance availability of support, given that the actors can foster shared values, empathic understanding, and mutual help.[27] Frequency of contact among network members was found to encourage provision of support. The higher the number of interactions among network members, the more likely these members were to share the same values. As a result, they are more aware of the needs and resources of one another, which facilitates assistance among the group.[28]

The current study is guided by a network model of social support where support is not only determined by social roles but is also constrained by the knowledge of the social context, which includes both relational patterns and network structure. We address four questions: What is the profile of the social networks of women on methadone? Is there a relationship between types of support and sources of support? How are network structures related to the flow of support? and, Who provides negative types of support, such as encouraging drug abuse?

We examine such characteristics of the social networks of women on methadone as network composition (a contact's gender, age, educational level, employment status, and current drug use status), relational properties (strength of network ties, physical proximity, and multiplexity), and network structure (density and size). We describe the flow of support and the types of positive and negative support, such as emotional, financial, instrumental, and drug-related support. We explore how kin and nonkin networks play a role in encouraging or discouraging drug use and how relational properties and network structures predict the flow of support. Finally, we consider the implications of the findings for social work practice. The target populations of most of the earlier studies on social networks have not included drug-using women. To our knowledge, this is the first study designed to address the relationship between social support, relational characteristics, and network structures in a female drug-using population.

Methods

Sample Recruitment

We recruited 151 women via posters and referrals from clinic counselors in three Harlem methadone clinics. Most of the participants were long-

term patients (average years in treatment = 3.8 years, SD = 4.4 years) who visited the clinics daily (mean = 5.3 times per week, SD = .976). Trained interviewers spent 90 minutes with each participant; interviews were held at the methadone clinics.

Demographic characteristics included respondent's age, ethnicity, marital status, educational level, employment, and number of children. We asked respondents about their use of drugs within the preceding 3 months, including heroin and crack cocaine, and use of injected drugs. For each substance, respondents reported both the quantity and frequency of use. Our "Social Network and Support Questionnaire for Methadone Patients" was adapted from the network section of the General Social Survey.[29] We asked respondents to name individuals with whom they had had frequent contact during the preceding 3 months. We asked two questions in order to separate kin from nonkin networks: "Thinking back to the family members you had contact with on a regular basis during the past 3 months, whom did you talk to, visit, or do things with most frequently?" and "Looking back over the past 3 months, think of people you had contact with on a regular basis outside your family, whom did you talk to, visit, or do things with most frequently?" Respondents were encouraged to provide as many names as they wished; however, we selected only the first five kin and five nonkin contacts for more detailed analyses. Using a square matrix, we also asked respondents to specify the relationship between all possible pairs of persons in their networks. Selected measurements on the network properties and the nature of social ties are listed in appendix A. Six kinds of social relationships were considered: member of the kinship group (including spouse and extended kin), current sex partner, neighbor, friend, professional contact (social worker, drug counselor), and coworker.

Social support included three types: financial or instrumental support, emotional or informational support, and assistance in drug-related activities. We used multiple items to measure each type of social support. Three items measured the financial or instrumental support ("borrows money from," "asks to care for children," and "asks for a place to stay"). Three items measured emotional or informational support ("talks to when depressed," "seeks advice," and "discusses important issues"). Three items measured assistance in drug-related activities ("asks for or buys drugs from," "do drugs together," and "exchanges drug information"). Respondents were asked how frequently they turned to their network members for support and whether network members also turned to them for support. We used a Likert scale (0 = "never," 1 = "sometimes but not often," 2 = "quite often," and 3 = "always") for these responses.

Finally, we assessed respondents' perceptions of how their network members influenced their drug use. For each network member, we used a single four-category item: whether the network member encouraged

her to stop using drugs, did not care about her drug use, was a "bad influence" on her, or did not know about her drug problem.

Data Analysis

From the interviews, we compiled information on demographic characteristics (e.g., age, ethnicity, education, marital status, and number of children) and drug use among respondents (e.g., noninjection crack cocaine, heroin, and injection drugs). We gathered data on the relational ties between respondents and network members and the sociodemographic characteristics and drug-use history of the network members. We also compiled information on the degree to which network members provide different types of social support. Further, we examined the degree of reciprocity regarding each item of social support, controlling for the network members' drug use, gender, and kin categories. We used six separate logistic regression models to evaluate to whom the respondents turned for support (nonkin vs. spouse, parents, children, siblings, other relatives, or sexual partners). The regression models controlled for network structure variables, such as personal characteristics (a contact's gender, age, educational level, employment status, and current drug-use status); relational characteristics (strength of ties, physical proximity, and multiplexity); and network structure (network density, network size). We examined six types of social support: child care (model 1), financial (model 2), a place to stay (model 3), emotional or informational (model 4), assistance in drug-related activities (model 5), and encouragement to stop using drugs (model 6).

The unit of analysis in the multiple logistic regression models was a pair consisting of the respondent and a contact. We thus began with a total of 795 pairs, an average of five for each respondent. However, to limit the interdependence of observations, we restricted the total number of pairs for each respondent to three; among the pairs excluded were those with children under age 18.[30]

A pair was coded as "1" if the respondent reported she had turned to that network member for a specific type of support and "0" if the respondent reported that she had not turned to that network member for such support. We constructed a set of six dichotomized dependent variables to indicate whether each type of support (child care, financial, place to stay, emotional or informational, encouragement to stop using drugs, and encouragement in drug-related activities) was present in each respondent-contact pair.

Results

Most of the 151 women in the sample were either Latina (45%) or African American (44%) (see table 1). The average age of the respondents

Table 1

DEMOGRAPHICS AND DRUG USE OF RESPONDENTS ($N = 151$)

Variables	Mean	SD	*N*	%
Age group:	38.32	6.75		
24–29			20	13.2
30–39			68	45.0
40 and over			63	41.7
Ethnicity*:				
African American			67	44.4
Hispanic			68	45.0
White			14	9.3
Educational level:				
Less than high school			78	51.7
High school			36	23.8
More than high school			37	24.5
Marital status:				
Single (never married)			56	24.5
Married			45	45.7
Separated, divorced, or widowed			50	33.1
Has children under age 18			93	61.6
HIV seropositive†			37	24.5
Average years in methadone clinics	3.8	4.4		
Illegal drug use in the past 3 months:				
None‡			46	30.5
Noninjection crack, cocaine, heroin			62	41.1
Injection drugs			43	28.5

* Two "other" ethnicities were not reported here.
† Self-reported.
‡ Methadone use only.

was 38.3 years (SD = 6.75), and more than half (52%) had not completed high school. A large majority of the respondents (70%) reported illicit drug use during the 3 months preceding the interview. The average network size was almost six individuals, of whom 3.3 were kin and 2.6 were nonkin. Thirteen women (9%) cited no kin members and 30 (20%) cited no nonkin members. This network size is slightly larger than those reported among injection drug users.[31] This discrepancy may be due to differences in measuring network membership. Differences might include whether all members of the network or only a representative subset were listed or whether individuals with a certain level of contact with the focal person were listed or only those whom the focal person considered significant. The degree of frequency with which contact has to occur for an individual to be considered an "active" member of the network may have differed among the studies. How many names a subject wished to reveal or the differing abilities of interviewers to elicit names might have varied. Finally, the content of the relationships being studied might have been measured differently.[32] In particular, researchers studying the networks of populations engaging in illicit or

Table 2

RELATIONSHIP BETWEEN RESPONDENTS AND NETWORK MEMBERS ($N = 795$)

Relationship	*N*	%
Kin:		
Legal spouse	41	8.9
Parents	70	15.3
Children	131	28.7
Siblings	120	26.3
Other relatives	95	20.8
Total	457	
Nonkin:		
Sex partner	48	14.2
Friends	168	49.7
Neighbors	90	26.6
Counselors or social workers	24	7.1
Coworkers	8	2.4
Total	338	

stigmatized activities find that subjects are reluctant to reveal names of network members.[33] Moreover, this discrepancy may also reflect that most previous network studies of drug users have focused exclusively on men or included too few female subjects for any meaningful analysis. One of the major findings of the present study was that the social networks of female drug users were similar to the networks of other drug users described in previous studies.[34] More than two-thirds of the nonkin network members had used drugs at some time, as had more than one-quarter of the kin network members.

We asked respondents about their relationships with network members. Among kin network members, respondents were most likely to mention children (29%), followed by siblings (26%), other relatives (21%), parents (15%), and spouses (9%). Among nonkin members, the categories of relationships were not mutually exclusive. However, the largest number (50%) were solely "friends" (who did not fit into the categories of sex partner, neighbor, professional contact, or coworker), followed by neighbors (27%), current nonspouse sexual partners (14%), and professional contacts, such as counselors or social workers (7%) (see table 2). Relationships with nonkin network members were of relatively long duration (mean = 6.9 years, median = 3.8 years).

Characteristics of Networks

Respondents portrayed the networks as long-term, close, and ethnically homogeneous, with high density and proximity. We also asked respondents to rank their network members according to how close the member is to them. Respondents regarded the majority of their relationships

with network members as "close" (94.5%). We defined a tie as strong when a respondent regarded a network member as her closest contact and talked to that person either daily or weekly. Of the total sample, 19 percent of the relationships were considered to be strong ties. Respondents talked to nonkin network members more often than to kin network members ($t = 4.8$, $p < .001$). They spoke to 81 percent of their nonkin network members daily and an additional 15 percent at least once a week. In contrast, they spoke to 68 percent of their kin network members daily and 20 percent at least once a week.

The physical proximity of respondents to nonkin network members was generally greater than their proximity to kin members. Among nonkin members, 62 percent either lived with or lived within walking distance of the respondents, compared with 53 percent of kin network members. Most of the respondents and their nonkin network members lived close to the methadone clinic.

Respondents tended to cite people with similar demographic backgrounds in their networks. They were more likely to cite female (58.5%) than male contacts, and the percentages of female contacts were similar for kin (58.9%) and nonkin networks (57.9%). Excluding missing data (10.9%), 63.9 percent of the nonkin network members had education levels similar to that of respondents. In terms of ethnic similarity, 81.2 percent of African Americans shared common ethnic origins with their nonkin contacts, 61.9 percent of Latinos shared ethnicity, and 48.4 percent of whites shared common ethnicity with their nonkin contacts. White respondents reported that 32.3 percent of their nonkin network was African American and 19.4 percent was Latino. Among the nonkin contacts of African-American respondents, 14.8 percent were Latino and 3.4 percent were white. Among the nonkin contacts of Latinas, 30.6 percent were African Americans and 6.8 percent were white.

Reciprocity and Support

The networks were characterized by strong reciprocal support—particularly for emotional issues and drug-related activities. Table 3 presents the adjusted probabilities that support is reciprocal, controlling for types of relationships (kin categories), gender, and drug-use categories. For emotional support, reciprocity was stronger and more apparent for kin categories than among nonkin network members. Reciprocity was not evident in financial support, child care, or furnishing shelter. Compared with non-drug-using network members, drug-using members were more likely to engage in drug-related activities with respondents and also to reciprocate in borrowing or lending money and seeking drug-purchasing advice.

Over half of all respondents sought out network members to discuss important concerns and seek advice or to talk when the respondent felt

Table 3

PROBABILITY OF SOCIAL SUPPORTS BEING RECIPROCATED

	KIN				NONKIN			
	Female		Male		Female		Male	
TYPE OF SUPPORT	Nonuser	Drug User	Nonuser	Drug User	Nonuser	Drug User	Nonuser	Drug User
Instrumental support:								
Borrowed money	.31***	.74***	.44	.57	.54***	.77***	.20***	.54***
Asks to take care of children	.22	.50	.32	.33	.40	.38		
Emotional or informational support:								
Talks to when depressed	.87	.99	.90	.90	.91	.82	.83	.92
Discusses important issues	.92	.92	.92	.96	.90	.86	.91	.93
Seeks advice	.77***	.94***	.82***	1.00***	.80	.90	.60***	.94***
Support for drug-related activity:								
Borrowed or asked for drugs	N.A.[a]	1.00[b]	N.A.[a]	.90	N.A.[a]	.86	.002[b]	.91

NOTE.—N.A. = not applicable.
[a]Cell size equals 0; no significance test performed.
[b]Cell size equals 1; no significance test performed.
***$p < .001$.

depressed. Fewer network members could be asked to provide financial help, and even fewer (7%) could offer a place to stay or child care (15%). Univariate analysis revealed that there were differences among those to whom female methadone patients turned for support (table 4). For emotional support, women turned to both kin and nonkin networks. For example, siblings (14%) and parents (10%) were the most likely sources of support within their kin networks, while friends were most likely to provide drug-related assistance. Women who needed someone to take care of their children usually turned to family members. Child care was most likely to be provided by parents (24%), followed by siblings (18%). Women who needed to borrow money for items other than drugs usually turned to their friends first (23%), followed by siblings. When these women needed a place to stay, they were most likely to turn to friends (32%). Moreover, drug-using network members provided positive as well as negative support.

Support for Drug Use

Ten percent of the network members were asked for drugs or sold them to the respondent, 18 percent were sought out to use drugs with respondents, and about 20 percent of the network members had facilitated an exchange of drug purchasing information. Siblings were the most likely kin network individuals to abet a respondent's drug use. Nevertheless, most assistance in drug-related activities was provided by nonkin network members, such as friends and neighbors. Of particular interest was the influence on drug activity that current sex partners exerted. Sex partners were the third most likely source for a drug transaction and for purchasing information (table 4). Respondents who used crack cocaine or heroin in addition to methadone cited more drug-using network members than respondents who used only methadone ($\chi^2 = 33$, $p < .001$). Only a small number of network contacts (9%) were said to be unaware of the respondents' drug use. More family members (12%) than nonkin members (6%) were unaware. Of all the network members, 67 percent encouraged respondents to stop using drugs, 16 percent did not reveal any particular attitude toward a respondent's drug use, and 8 percent were perceived as a "bad influence."

Network Density and Multiplexity

We considered a respondent's network dense if network members were mutually connected by close relationships. Higher density is associated with network mobilization of support for the focal person and to the social integration that aids coordination. Therefore, higher density enhances support provision from network members.[35] The average density of an individual's network was .614 (SD = .28), that is, on average, 61.4 percent of the members in each respondent's personal network were connected with another member of the network.

Table 4

Percentage of Support Given by Types of Relationships among Network Members

	Instrumental Support			Emotional or Informational Support			Drug-Related Support		
	Borrow Money (%)	A Place to Stay (%)	Care for Children (%)	Talk When Depressed (%)	Seek Advice (%)	Discuss Important Matters (%)	Ask for, Buy Drugs (%)	Used Drugs Together (%)	Exchange Drug Information (%)
Legal spouse	5	7	10	7	8	7	6	5	7
Parents	13	12	24	10	12	10	1	1	1
Adult children	8	6	3	11	10	11	0	0	1
Siblings	15	14	18	14	14	14	9	12	11
Other relatives	10	15	16	8	8	10	5	7	5
Current sex partners	8	9	8	8	9	7	21	11	13
Friends	23	32	11	24	21	19	31	33	39
Neighbors	14	7	10	21	9	8	26	22	23
Social worker or counselor	1	0	0	3	4	3	0	0	0
N	307	59	122	429	410	499	81	139	155

Multiplexity is defined as the number of social relationships between a respondent and each of her network members.[36] Multiplexity was considered present when the network member had at least two types of relationships with a respondent other than that of friend. Because respondents regarded the majority of network members as their friends, we did not consider this relationship when assessing the degree of multiplexity. If a network member was both a respondent's sibling and a coworker, her relationship with this respondent was considered multiplex. Network members who have multiple relationships with a person are more likely to provide support or resources because they have detailed knowledge of each other's needs and multiple claims on each other's attention.[37] In this sample, 46 network members (6%) had multiple relationships with respondents. Nine members were respondents' neighbors and sexual partners, two members were coworkers and sexual partners, and three members were respondents' siblings and social workers.

The network profiles that emerged from this study are supported by social learning theories that view drug use as a learned behavior governed by reinforcement processes.[38] These theories posit that the social networks of drug users are similar to those of non–drug users in terms of structure and function but consist primarily of persons who use and approve of illegal drugs. This premise was clearly reflected in the present study. Emotional and functional attachments to other drug users may reinforce drug use in the context of a larger society that discourages those activities.[39]

Multivariate Analysis

Model 1 of the multivariate analysis (table 5) examined child-care provision. Compared with nonkin social contacts, and after adjusting for network variables, family members and current sex partners were more likely to provide child care. Child care was considered a substantial form of support because 60 percent of respondents were single mothers and 62 percent had children under the age of 18. Females were twice as likely to provide child care than were males; this is also true in the general population.[40] Network members who performed multiple roles were about four times more likely to provide child care than their counterparts. Network size was also a significant factor here.

Current drug users were more likely than non–drug users to provide financial support (model 2). We speculate that drug users may provide financial support through an exchange of drugs or sex.[41] Gender and age were two factors associated with financial assistance. Female network members were 1.6 times as likely as male network members to be sources of financial assistance. Members with strong ties were 1.7 times as likely as those with weak ties to offer financial support. Compared with

Table 5

Logistic Regression Models

Variables	Model 1: Child Care		Model 2: Financial Aid		Model 3: A Place to Stay		Model 4: Emotional Support		Model 5: Drug-Related Aid		Model 6: Encourage to Stop Using Drugs	
	Odds Ratio	SE	Odds Ratio	SE	Odds Ratio	SE	Odds Ratio	SE	Odds Ratio	SE	Odds Ratio	SE
Contact's characteristics:												
Female	2.13***	.32***	1.61**	.21**	1.07	.38	1.85***	.22***	1.03	.27	1.04	.24
Education:												
High school	1.35	.27	1.29	.21	1.01	.35	1.22	.21	.84	.25	1.49*	.24*
More than high school	1.37	.33	1.21	.25	1.06	.45	1.49	.25	.71	.32	1.78*	.31*
Age	1.01	.01	1.02***	.01***	1.04***	.01***	1.01	.01	1.02*	.01*	1.01	1.01
Currently employed	1.21	.26	1.26	.21	.98	.37	1.47*	.21*	.94	.26	1.42	.25
Currently use drugs	.72	.31	1.78***	.21***	4.17***	.37***	1.18	.22	14.2***	.25***	.34***	.23***
Type of relationship (nonkin, nonsex partner):												
Spouse	7***	.56***	.99	.42	1.49	.71	5.55***	.46***	1.03	.51	4.11***	.56***
Parents	5.62***	.46***	1.35	.38	1.12	.65	1.26	.38	1.49	.45	4.78***	.61***
Siblings	2.45***	.38***	.89	.26	1.22	.49	.68	.26	1.03	.33	2.09***	.29***
Adult children	.81	.64	1.45	.36	2.16	.77	1.99*	.69*	.22**	.64**	4.94***	.49***
Extended kin	2.22**	.41**	.87	.31	1.91	.52	.36***	.33***	.51	.42	1.31	.33
Nonspouse sex partner	6.86***	.54***	1.61	.39	1.31	.65	4.05***	.42***	3.43***	.51***	1.95	.45
Relationship characteristics:												
Strength of relationship	.76	.31	1.66**	.23**	1.59	.38	1.78***	.25***	1.67*	.29*	1.77*	.31*
Physical proximity	.94	.27	1.39*	.19*	.96	.35	.73	.21	1.72**	.25**	.67*	.23*
Multiplexity	3.87***	.41***	1.12	.37	2.3	.54	1.14	.39	1.11	.47	1.71	.55
Network characteristics:												
Density	1.27	.51	1.84*	.36*	.32**	.58**	1.11	.37	.59	.45	1.98	.42
Network size greater than 6	1.58*	.26*	1.31	.19	1.14	.32	.68**	.18**	1.15	.23	.71	.21

*$p < .1$.
**$p < .05$.
***$p < .001$.

members who lived farther away, those who lived closer to respondents were 1.4 times as likely to be the source of financial support. Although network members who lived nearby were more likely to be drug users, they were also more likely to provide financial support to the women in our study. Compared with members in a less dense network, those in a denser social network were 1.8 times as likely to be sources of financial support.

Model 3, which predicted the provision of shelter, displayed a similar pattern to that in model 2. None of the kin or relational characteristics were associated with providing housing, yet current drug users were 4.2 times as likely to provide respondents with a place to stay than were non–drug users. Older network members were also more likely to provide shelter than were younger members. Network members who were in denser networks were one-third as likely as members in less dense networks to provide respondents with a place to stay.

Model 4 examined who provided the three types of emotional support. The analysis was limited to network members who simultaneously provided all three types of emotional and informational support: giving advice, discussing important matters, and talking to respondents when they were feeling depressed. The results revealed that spouses, sex partners, and adult children were significant sources of emotional and informational support as compared with nonkin social contacts. Legal spouses were about 5.5 times as likely, sex partners were four times as likely, and adult children were twice as likely as nonkin to provide emotional support. However, respondents were more likely to solicit emotional support from nonkin members than from extended kin. Female members were 1.9 times as likely to provide emotional support than were male members. Currently employed network members were about 1.5 times as likely than unemployed network members to be sources of emotional support for respondents. Network members who were in larger networks were two-thirds as likely as network members in smaller networks to be sought as sources of emotional support.

Model 5 showed that family members were not significant sources of assistance in drug-related activities. The limited financial resources available in the kin networks of these women likely explain this phenomenon. Because kin reside in low-income, inner-city communities, we speculate that most are supported by welfare payments, as are the respondents.[42] Network members who currently used drugs were 14 times as likely as non-drug-using members to help respondents procure drugs. Those with strong ties were also more likely than those with weak ties to provide assistance in drug-related activities. Network members who lived closer to respondents were also more likely to provide assistance in drug acquisition than their counterparts. As expected, family members were not usually sources of assistance in obtaining drugs or in exchanging

drug-purchasing information. Of particular interest is the finding that current sex partners not only provided emotional support and child care but also served as contacts for drug transactions and for exchanging drug-related information.

The final model (model 6) examined those positive influences on respondents' drug use. Kin members were generally more likely to encourage respondents to stop using drugs than nonkin and sex partners. Spouses, parents, siblings, and adult children were all significant sources of positive influence. Network members with higher educational backgrounds were more likely to encourage respondents to stop using drugs. Those with strong ties were 1.8 times as likely as those with weak ties to offer a positive influence. Members who were currently using drugs were one-third as likely to be sources of positive influence on drug-use reduction. The closer the network member lived to the respondent, the less likely that member was to be a source of positive influence on drug use.

Discussion

It is important to note the extent to which different personal attributes of network members, characteristics of social ties, and network structures were individually associated with distinct types of support. This information affords another perspective into the dynamics of the interpersonal flow of support in networks. Similar to studies of other populations, female network members were more likely than male network members to provide support to respondents.[43] Older network members were more likely than younger network members to provide positive support as well as to engage in drug-related activities, possibly because they have more resources to offer.

Network members who lived closer to respondents were 1.4 times as likely as members who lived farther away to be the source of financial support. This finding suggests an interesting perspective on what Rodrick Wallace has called a "sociogeographic network."[44] The closer the network members lived to the respondents, the less likely they were to be a positive source of influence on curtailing respondents' drug use. In the present study, network members who lived near the respondents also resided in Harlem. We speculate that this negative support from network members living in the same area might be a phenomenon specifically related to the social and economic characteristics of this neighborhood.[45]

Multiplexity was found to be associated with one type of support—child care. Child care was shown to be related to kinship. It also appears that other network members who provided child care had multiple relationships with the respondents (e.g., being a friend as well as a neighbor or a coworker). The higher the multiplexity among network members,

the more likely they were aware of one another's needs and resources, which may encourage support. However, in our sample, multiplexity was only 6 percent, which is relatively lower than the proportion of multiple relationships found in other studies, such as Claude Fischer's Northern California Community Study (18%) and Karen E. Campbell and Barret A. Lee's Nashville Neighborhood Study (11.4%).[46]

Network members who currently use drugs were more likely than those who did not to provide financial aid, furnish a place to stay, or assist in drug procurement and less likely to encourage respondents to stop using drugs. This finding suggests the influence of shared values, common lifestyles, and higher levels of reciprocity and proximity among the respondents and network members who were currently using drugs.

In this study, our conceptualization of a strong tie reflected not only frequent contact but also a close relationship. Strong network ties, rather than weak ties, were associated with all types of support except child care. This suggests that only the stronger relationships could be mobilized to provide resources in these women's networks. However, strong ties were not associated with provision of child care, possibly because this sort of support seems to be associated more with kinship rather than relational characteristics and network structure.

The mean density of networks is relatively higher than that found in other studies.[47] This might be explained by the fact that over half of the network members in this study were family members. Network density was positively associated with financial support but negatively associated with providing shelter, a finding to be added to the inconsistent body of evidence on the relationship between network density and social support.[48] For example, Edwina Uehara suggested that members of dense networks receive more support, but Barton Hirsch found that women were more likely to receive satisfying support from low-density networks.[49] Another study found that high density was associated with frequency of drinking alcohol among college males, while Carl Latkin and colleagues reported that higher network density was associated with sharing needles among drug users.[50] Other studies found that high density (predominantly kin) tends to be associated with the provision of major services such as care in medical emergencies or for chronic health problems. Low-density networks (predominantly made up of friends) tend to provide companionship.

Weighing in among the conflicting suggestions in the literature, we offer an explanation on the negative association between network density and assistance related to asking for a place to stay. We suggest that a woman may not turn to friends who know her well as a way to avoid disclosing a particularly strained situation. If she needs a place to stay to escape an abusive relationship or to get away from people who might harm her recovery, she may not turn to individuals in her dense network.

Alternately, drug-using women may have already exhausted the good will of close associates by behaving in ways that would alienate the most generous of individuals.

The results of this study support the assertion that interpersonal support not only is determined by social roles but is also constrained by the relational patterns (i.e., relational characteristics and network structure) in which an individual is embedded. Support within a woman's personal network is contingent on the types of support required under different circumstances as well as the characteristics of the relationships and the structure of the social networks.

Several limitations of this study bear mention. First, the measurement scheme captured respondents' most frequent contacts but may have overlooked other relevant network members, such as a relative who lives far away or a drug-using peer with whom the respondent interacts only occasionally. Second, we primarily examined respondents' personal networks (links between the respondent and network members). Data were collected from each respondent's perspective and were not corroborated by the designated network members. Because a nonrandom sample was employed, generalizability of the results to other female methadone patients is limited, and conclusions must be viewed as tentative. The study should be replicated with samples of women randomly drawn from various methadone-maintenance settings and validated with multimodal measurement schemes.

Practice Implications

Our findings have potentially important practice implications for social workers who work with African-American and Latina women in methadone-maintenance settings. Social workers and counselors in methadone clinics should move beyond the level of individual interventions to engage the social networks of their clients. Social workers or other professionals working with this population might help such women examine their social networks for those to whom they may turn for support. Such determinations should be based on the relational characteristics and structure of their networks and the type of support that they need.

Some women depend on their sexual partners for negative (drug-related) as well as positive (emotional and financial) social supports. Women on methadone need to be aware of the double roles that their sex partners fulfill and to learn help-seeking and interpersonal skills that will enable them to expand their non-drug-using networks and reduce their HIV-risk behavior. The strong ties and close relationships with nonkin and kin network members found in this study should be considered as possible resources for helping women on methadone stay in treatment and avoid drugs and unsafe sex. For example, non-drug-using network members could become role models and sources of influence from

whom methadone patients may learn new adaptive behaviors and social norms that value a drug-free lifestyle. Because reciprocity of emotional support among the women and their non-drug-using networks is quite high, clients as well as their kin network members can be involved in social support interventions in which they can learn help-seeking skills. Help-seeking skills will include not only how to ask for help but how to give it.

Social workers and other health professionals working with methadone patients need to be well trained in assessing and intervening with clients' social networks. Methadone-maintenance programs could make systematic efforts to mobilize clients' social networks and to increase the sources of positive influence in these networks. Intervention programs may include peer-led self-help and social diffusion approaches. Both approaches are considered to be strategies for treating addiction and preventing HIV/AIDS.[51] On the basis of a peer-support example that has been used with cocaine users, methadone patients were recruited to provide support to one another, promoting a sense of mutuality and a goal of abstinence among the patients.[52] Under the leadership of the abstinent senior patients, participants came to understand that recovery was in their own hands. In the social diffusion approach, counselors trained methadone patients, who were otherwise drug free, to disseminate messages that led to changes in drug norms and behavior among other methadone patients. Both of these approaches intervene at the level of the social networks by adding new members who may be instrumental in supporting positive outcomes.

Appendix A

Table A1

Selected Measurements of an Ego-Centered Network

Variables	Descriptions
Sample description:	
Contacts' demographic attributes	Gender, ethnicity, age, education, and so forth
Contacts' drug-use histories	Frequencies of current and past drug use
Relational content:	
Type of relationship	Whether the network person is a spouse, parent, relative, neighbor, friend, and so forth
Sexual relationship	Whether the network person is a main or casual sexual partner
Closeness of ties	"Do you feel close to this person?"
Physical proximity	"How far does [name] live from you?" 1 = lives in the same apartment 2 = within the same block or walking distance 3 = within 30 minutes by public transportation 4 = within 2 hours by public transportation 5 = more than 2 hours by public transportation

Table A1 (*continued*)

Variables	Descriptions
Contact frequency	"How often do you usually talk to [name]?" 1 = almost every day 2 = at least once a week 3 = at least once a month 4 = less than once a month
Duration of ties	"How long have you known [name]?" (in years)
Structural variables:	
Network size	Total number of contacts, number of kin contacts, number of nonkin contacts
Relationships among network persons (network density)	"How well does [name of network person *A*] know [name of network person *B*]?" 1 = total stranger 2 = acquaintance 3 = particularly close to 4 = acquaintances, but dislike each other 5 = know each other well, but dislike each other
Social support:	
Instrumental social support	"Borrows money from," "asks for a place to stay," "asks to care for children"
Emotional social support	"Talks to when depressed," "seeks advice," "discusses important issues"
Support for drug-related activities	"Borrow, ask for, or buy drugs from," "use drugs together," "exchange drug information"
Perceived influence on drug-risk behavior	"Overall, would you say [name] encourages you to stop, does not care about, or has a bad influence on your drug behavior?"

Notes

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$$\text{density} = \frac{\sum_{i=1}^{n}\sum_{i=1}^{n} x_{ij}}{n(n-1)},$$

where $x_{ij} = 1$, if i and j are "close"; .5, if i and j are "acquaintances"; and 0 if i and j are "strangers" or "dislike each other" and where N = the total number of contacts in the respondent's network.

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