Gender Differences of Young Adults With Schizophrenic Disorders in Community Care

by Mary Ann Test, Suzanne Senn Burke, and Lynn S. Wallisch

Abstract

Gender differences were studied in the lives of 122 young adults (mean age = 23.11 years) with schizophrenia or schizophrenia-related disorders who are participants in a long-term study of progressive community care. Across the first 2 years, males who required hospitalization showed a trend toward greater recidivism and spent more time in institutions than women who required hospitalization. Women spent more time in inpatient medical settings for nonpsychiatric reasons. In community living domains, significant gender differences were found in parent roles, frequency of heterosexual relationships and behaviors, substance use, arrest rates, the number who spent time in jail, and residential settings. In the study to date, more males than females have committed suicide. We discuss specific ways in which treatment can be sensitive to these gender-relevant issues. We also note the need for future research on gender differences in schizophrenia to consider the very different community lives of men and women.

Despite a burgeoning of literature about the community care of persons with serious mental illnesses, relatively little is known about how the lives of men and women with schizophrenia and schizophrenia-related disorders are similar and different. It is critical to address this issue for two reasons. First, an understanding of the differing psychosocial lives of men and women with schizophrenia in the community is essential if we are to provide the most effective and humane care. The works of Seeman (1983) and others (Test and Berlin 1981; Bachrach and Nadelson 1988) are illuminating in suggesting that men and women with schizophrenia and other serious mental illnesses may at times require different treatment approaches. Second, knowledge about the differing community lives of young men and young women with schizophrenia can contribute to an understanding of gender differences in longer term outcome. The daily experiences of persons with schizophrenia both affect and are affected by the course of disorder.

The absence of attention to gender differences in the community care literature on young adults with serious mental illnesses is striking in light of the fact that the young adult years are filled with gender-relevant issues, particularly in the sociosexual and instrumental role areas. Many of the most often cited articles concerning young adults with serious mental illnesses either do not address gender differences or issues, or make only the single point that the majority of young adult clients with serious mental illnesses are male (generally, 55–66%) (e.g., Pepper et al. 1981; Schwartz and Goldfinger 1981; Bachrach 1982; Sheets et al. 1982; Harris and Bergman 1984; Intagliata and Baker 1984). Observations and data presented in these articles often reveal frequent substance use, high arrest rates, suicide, and underutilization or overutilization of services. Findings are not analyzed by gender, however, and it is left unclear whether these areas are...
problematic only for young adult males, or whether young women with serious mental illnesses also experience difficulties in these areas, or indeed have their own issues.

In this article, we present preliminary findings about gender similarities and differences for one group of young adults in community care, persons with clearly defined schizophrenia or schizophrenia-related disorders who are participants in an ongoing study of long-term community treatment. We summarize the study design and sample characteristics and present data pertaining to a number of life domains to aid an understanding of the similarities and differences in the community lives of these young men and women. Since we are in the early stages of data analyses in this study, our purposes here are descriptive rather than explanatory.

Methods

The long-term study from which the current data on gender differences are drawn is still in progress in Madison, Wisconsin. A major aim of the study is to investigate the course of illness and treatment outcome of persons with schizophrenia and schizophrenia-related disorders who are treated from early on in long-term community care programs. The study subjects and methods are summarized below; further detail can be found in Test et al. (1985), Test (in press), and Test et al. (in press).

Clients were admitted to the study as they became available from five inpatient and two outpatient services. Criteria for study entry were as follows: (1) ages 18–30; (2) residence in Dane County, Wisconsin; (3) diagnosis of schizophrenia or schizoaffective disorder according to the Research Diagnostic Criteria (RDC; Spitzer et al. 1978), or schizotypal personality disorder according to DSM-III (American Psychiatric Association 1980); (4) < 12 months of prior (total accumulated) time in the combination of psychiatric and penal institutions; and (5) informed consent. Persons with mental retardation, organic brain syndrome, or a primary diagnosis of alcoholism were excluded.

Subjects were randomly assigned to two different models of progressive community care, the Training in Community Living (TCL) program (60%) or the usual system of care in Dane County (DANE) (40%). Clients remain in their respective treatment systems for the duration of the study; for all clients, this is at least 5 years. The TCL program is a "model" community support program that delivers biopsychosocial treatments to its clients using a great deal of assertive outreach and "in vivo" support and coaching (Stein and Test 1980, 1985; Test, in press). The DANE system is also a national model of community care which contains many exemplary components that intervene at different times depending on the individual client's needs (Stein et al., in press).

Demographic and historic information were collected from clients 3 months after their admission through interviews by independent research staff. The primary data regarding client functioning are collected through face-to-face interviews by these research staff at time of study entry and at 6-month intervals thereafter. Details about the data sources and variable definitions in each area of functioning discussed here are presented in Results.

Characteristics of the Sample. One hundred twenty-two clients met study criteria and were randomly assigned to the two treatment conditions between 1978 and early 1985. By early 1990, all of these persons will have received at least 5 years of treatment and research follow-along. Table 1 presents their characteristics at study entry by gender.

The sample contains more than twice as many males as females. While persons of both sexes were young at study entry, the women were significantly older than the men. Significantly more of the women were ever married, though, at study entry, half of the ever married women and a quarter of the ever married men were separated or divorced; thus, the large majority of both sexes were not with a marital partner at study entry. While the majority of both sexes carried schizophrenic diagnoses, more of the women than the men were diagnosed as having schizoaffective disorder. Most clients had been previously hospitalized; the clients with a previous admission had a mean of 3.35 admissions (SD = 2.77); this variable did not differ significantly by gender. The sample is predominantly Caucasian (95.9%), and 81 percent of the subjects are high school graduates (71.9% regular; 9.1% General Educational Development). Gender differences were not found on most of a large number of demographic and historical variables examined. Exceptions pertained to parental roles, arrests, and substance use (see Results).

The gender differences revealed in table 1 are consistent with what one would expect from past research on
**Table 1. Demographic and psychiatric history data by gender (n = 122)**

<table>
<thead>
<tr>
<th>Variable</th>
<th>Males (n = 82)</th>
<th>Females (n = 40)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Group</strong></td>
<td>Training in Community Living Dane County</td>
<td></td>
</tr>
<tr>
<td>Age at study admission</td>
<td>Mean 22.59</td>
<td>(a) 24.20</td>
</tr>
<tr>
<td></td>
<td>SD 3.39</td>
<td>3.93</td>
</tr>
<tr>
<td>Marital status</td>
<td>Single 78 (95.12%)</td>
<td>28 (70.00%)</td>
</tr>
<tr>
<td></td>
<td>Separated/divorced 3 (3.66%)</td>
<td>6 (15.00%)</td>
</tr>
<tr>
<td></td>
<td>Married 1 (1.22%)</td>
<td>6 (15.00%)</td>
</tr>
<tr>
<td>Diagnosis</td>
<td>Schizophrenia (RDC) 66 (80.49%)</td>
<td>24 (60.00%)</td>
</tr>
<tr>
<td></td>
<td>Schizoaffective (RDC) 13 (15.85%)</td>
<td>(c) 15 (37.50%)</td>
</tr>
<tr>
<td></td>
<td>Schizotypal personality (DSM-III) 3 (3.66%)</td>
<td>1 (2.50%)</td>
</tr>
<tr>
<td>Age at first mental health contact¹</td>
<td>Mean 18.98</td>
<td>19.13</td>
</tr>
<tr>
<td></td>
<td>SD 4.53</td>
<td>5.37</td>
</tr>
<tr>
<td>Ever an inpatient?</td>
<td>Yes 64 (78.05%)</td>
<td>35 (87.50%)</td>
</tr>
<tr>
<td></td>
<td>No 18 (21.95%)</td>
<td>5 (12.50%)</td>
</tr>
<tr>
<td>Age at first admission</td>
<td>Mean 20.34</td>
<td>21.43</td>
</tr>
<tr>
<td></td>
<td>(if admitted) SD 3.05</td>
<td>3.65</td>
</tr>
<tr>
<td></td>
<td>n 62</td>
<td>35</td>
</tr>
<tr>
<td>Duration all admissions</td>
<td>Mean 65.87</td>
<td>63.31</td>
</tr>
<tr>
<td></td>
<td>(if admitted) SD 65.85</td>
<td>57.70</td>
</tr>
<tr>
<td></td>
<td>(days) n 62</td>
<td>35</td>
</tr>
</tbody>
</table>

Note.—(a) \( p < 0.05, df = 120, t = 2.34 \); (b) \( p < 0.001, df = 2, \chi^2 = 15.54 \); (c) \( p < 0.05, df = 2, \chi^2 = 7.13 \). RDC = Research Diagnostic Criteria.

¹ n = 80 for males.

Gender differences in schizophrenia. For instance, the consistently cited later age of onset of schizophrenia in women (i.e., typically late twenties or early thirties for women vs. late teens and early twenties for men) would lead to a prediction that fewer women than men would meet our study entry criteria of ages 18-30 in a medium-sized catchment area such as Dane County. Additionally, research indicates that women with schizophrenic disorders are more often ever married than men, and some studies suggest more frequent occurrence of affective symptoms in women who have schizophrenia or schizophrenia-related disorders (see reviews by Lewine [1981, 1988]).

The fact that the women in this study may not be typical of the population of women with schizophrenia-related disorders,
since study females are at the early end of the age of onset continuum and therefore may be more seriously ill than most women with these illnesses, should be kept in mind. For this reason, and because we have not yet analyzed our data in a multivariate fashion, the primary intent and significance of this early report is to illuminate some gender-relevant issues in the community lives of young adults with schizophrenia or schizophrenia-related disorders that are often ignored by care providers and researchers alike, instead of presenting or seeking explanation for gender differences in schizophrenia.

Results

Results pertain to clients' first 2 years in the long-term study unless otherwise noted. Where analytic procedures involved an investigation of treatment group as well as gender differences, only findings pertaining to gender are reported here.

Time in Inpatient Settings. The number of days that clients spent in inpatient psychiatric settings and in nursing homes was obtained during the 6-month interviews and verified through institutional records. In this report, we combine time in inpatient psychiatric facilities with time in nursing homes ("IP + NH"), since Wisconsin nursing homes are similar in many ways to psychiatric institutions. (Time spent in nursing homes during the first 2 years was very low for these young adult clients and did not differ significantly by gender.) We studied total days spent in IP + NH during three time segments: the 6 months preceding study entry; the 6 months after study entry; and months 7-24. The first period examines prestudy differences; the initial 6 months provides information about the period of recompensation after study entry; and the subsequent 18-month period investigates issues of relapse or rehospitalization after clients were stabilized. At each of these periods, we conducted $2 \times 2$ analyses of variance (ANOVAs) (Group $\times$ Gender) on the rank-transformed scores (days) for those clients with complete living situation data across the first 2 years ($n = 113$; males $= 76$, females $= 37$). Rank transformations were used to address distributional issues in the data (Conover and Iman 1981).

There were no significant effects of gender on days spent in IP + NH during either the baseline, initial 6-month, or 7- to 24-month periods. Clients spent relatively little time in these institutional settings, probably largely a function of the strong community-based philosophy of care in Dane County, and the progressive and comprehensive community support systems in which these clients were involved (Test, in press). The mean days ($\pm$ SD) in these settings by gender were the following: 6 months preentry: 13.18 $\pm$ 17.47 for males, 17.00 $\pm$ 20.64 for females; initial 6 months: 12.01 $\pm$ 25.31 for males, 9.65 $\pm$ 18.64 for females; months 7-24: 24.28 $\pm$ 72.83 for males, 9.28 $\pm$ 32.33 for females.

We also examined the proportion of each gender who were hospitalized (IP + NH) at all during the 2-year period, excluding the hospitalization at study entry if clients entered the study from an inpatient setting. There was not a significant gender difference; 42.10 percent of the males and 37.83 percent of the females required hospitalization at some time. There was also no significant gender difference in average length of stay per episode of hospitalization (median of 15 days for males and 13 days for females). There was, however, a trend (Mann-Whitney test, $p < 0.10$) for those males with at least one hospitalization to have a greater number of hospitalizations than the females who had at least one hospitalization (mean $\pm$ SD hospitalizations: 2.34 $\pm$ 1.77 for males, 1.86 $\pm$ 1.99 for females), contributing to a significantly greater number of total days in IP + NH for those males with at least one postentry admission relative to those females with at least one postentry hospitalization (mean $\pm$ SD days: 70.59 $\pm$ 124.50 for males, 33.21 $\pm$ 64.01 for females; Mann-Whitney test, $p < 0.05$).

We also examined time spent in general medical inpatient settings for nonpsychiatric reasons. During the 6 months before study entry, women spent a mean of 0.11 days in these settings (SD = 0.52) relative to no days for males ($F = 4.07$; $df = 1,109$; $p < 0.05$). There was a trend in the same direction during the first 6 months after entry ($F = 3.39$; $df = 1,109$; $p < 0.10$), and during the 7-24-month period women again spent significantly more days than men in these hospitals (mean $\pm$ SD days: 0.18 $\pm$ 1.61 for males, 0.24 $\pm$ 1.04 for females; $F = 6.00$; $df = 1,109$; $p < 0.05$).1

1In this section and in the next, the F’s reported are for the main effect of gender in the Group $\times$ Gender ANOVA on rank-transformed scores (days). The means and SDs presented are actual days (not ranked days), however, to provide the reader with a better sense of the findings.
Community Residential Settings.

Information about where clients were living was obtained during the 6-month interviews. Using time segments, sample size, and analyses identical to those described above for IP + NH, we examined group and gender differences in the number of days that clients had resided in the following settings: (1) homeless (including time in homeless shelters); (2) jail/penal facilities; (3) family (older generations); (4) high-supervision residences (e.g., group homes, foster care); (5) semisupervised settings (e.g., sheltered apartments); (6) rooms; and (7) scattered apartments/houses.

During the 6 months before study entry, females spent significantly more days than males in apartments/houses (mean ± SD days: 46.37 ± 68.20 for males, 98.92 ± 72.93 for females; F = 3.06; df = 1,109; p < 0.05). There were also trends for males to spend more days than females in rooms (F = 2.98; df = 1,109; p < 0.10) and in penal settings (F = 3.44; df = 1,109; p < 0.10). It should be noted that across this period neither sex spent large amounts of time in penal settings (mean ± SD days: 0.30 ± 0.78 for males, 0.30 ± 0.78 for females).

Clients in this study spent relatively few days homeless or in homeless shelters, and there were no significant gender differences on this variable at any of the three time segments examined. For instance, during months 7-24 (540 days), the mean days in homelessness was 1.32 for males; (SD = ± 6.94) and 6.14 for females (SD = ± 26.60). During this period, 6.6 percent of the men spent some time in homelessness relative to 10.8 percent of the women.

Work Functioning and Parent Roles.

Analyses of data on employment activities of study clients are still in progress; hence detailed data on these variables will be reported elsewhere. Preliminary findings suggest, however, that the most important gender differences across the first 2 years of the study may not be in the area of out-of-home work behavior (i.e., sheltered work and market employment), but rather in the fact that more of the women than men were caring for children.

Thirteen of the women (32.5%) and four of the men (4.9%) reported in the Demographic/History interview that they had primary caretaking responsibility for natural (biological) children at some time before study entry. During the first 2 years of the study, one of these women had an additional child, and two women who had not previously been mothers had children (one birth was stillborn), raising the proportion of women who had experienced childbirth to 37.5 percent. Information about possible termination of pregnancies before childbirth was not available.

The 14 women who had had living children had a range of one to four children (mean = 1.54). In 2 cases parental responsibility was relinquished at birth, but in the other 12 cases the child(ren) lived with the mother for substantial periods of time. In all of these cases, however, the mothers gave up parenting responsibility for some period(s); in some cases this was due to hospitalization, but reasons for other instances are not known. At least 8 of these 12 women spent substantial periods of time rearing their child(ren) alone. The large majority of these mothers were single, separated, or divorced, and while some resided at times with spouse, significant other, parents, or siblings, each often lived alone with their child(ren) for significant periods of time.

Social and Sociosexual Lives.

Clients were asked at the 6-month interviews how many close friends they had and how many of these friends they had had contact with during the past month. Neither the number of friends nor the number of friends that clients had contact within the past month differed by gender at study entry or at any of...
the interview periods across the first 2 years. At 24 months, for instance, males had a mean of 3.19 peer close friends (SD = ± 3.88); females, a mean of 2.77 (SD = ± 2.62). Males said they had had contact with a mean of 2.81 close peer friends during the past month (SD = ± 3.24) relative to a mean of 2.57 for females (SD = ± 2.49). Within each gender there was also a subgroup of clients who said they had no peer close friends. For instance, at 24 months, 22.85 percent of the males said they had no peer close friends compared with 20.00 percent of the women. At the 6-month period, this subgroup was significantly larger for males (31.51% vs. 13.16%; χ² = 4.46, df = 1, p < 0.05), but this was likely due to chance since this finding was not consistent across time.

Major gender differences were found in the area of heterosexual relationships, which was studied by asking clients at each follow-along interview about their current marital and cohabiting statuses, and whether they had dated, kissed, or had sex during the month preceding the interview. Since we only inquired about heterosexual relationships, information is not available about same-sex intimate behaviors. Table 2 contains the major findings. Sample sizes vary slightly across time periods due to missing data; differential attrition from data collection by gender did not occur except where noted below. While the multiple tests inflate the probability of Type I errors, the consistency of the results across time periods and across variables supports the internal validity of the general findings.

The table 2 variable “living with a partner” includes both married and unmarried cohabitators. At each time period but the 18-month period, there were significantly more women than men residing with an opposite-sex partner; for males, this proportion was consistently very low and for women the proportion living with a partner never exceeded one-fifth.

Table 2 describes “dating” only for clients who were not living with a partner of the opposite sex at the time of the interview. Thus, the eligible sample includes almost all of the males but excludes a somewhat larger segment of the women—indeed, perhaps the better functioning (i.e., cohabiting) ones. Despite this bias, at the 6-, 18-, and 24-month interview periods, a significantly greater proportion of women than men said that they had had at least one date during the past month, and there was a trend in the same direction at 12 months. At least half of the noncohabiting women were dating at each period, whereas the large majority of the males were not. The median number of dates during the past month for persons who had dated ranged from 1 to 5.5 and differed by gender only at the 24-month period, when the female daters reported a median of four dates versus two for the male “daters” (Mann-Whitney tests, p < 0.05). Findings and gender differences regarding the number who said they had kissed were quite similar to the dating variable, although at each time period some clients who had dated said they had not kissed, and some who had kissed said they had not dated.

Table 2 also portrays the number of clients (both cohabiting and noncohabiting) who said they had had sex with an opposite-sex partner at least once during the month before the interview. At the study entry and 18-month periods, there were significantly more missing data for women than men on this variable. During two of the time periods for which such differential attrition was not a problem (6 and 24 months), a significantly greater proportion of the women than men reported that they had had sex, and a trend in the same direction was found at 12 months. Findings are quite similar if only clients not living with a partner are considered, although frequencies of those having sex are reduced slightly in both sexes.

We also examined data for those clients who had complete data on the “had sex” variable across all five time periods to ascertain the proportion of clients who reported having sex at least once during the 5 months assessed from study entry through 2 years. Only 47.50 percent of the women versus 69.51 percent of the males had complete data, so findings may not be generalizable to the population. Of this sample, however, 73.68 percent of the women and 42.11 percent of the males said they had had sex during at least one of the five periods assessed (χ² = 4.49, df = 1, p < 0.05).

Because of the high vulnerability to exploitation of persons with serious mental illnesses, we attempted to investigate the extent to which their sexual experiences represented positive social functioning versus possible victimization. We examined clients’ responses to an item on a Satisfaction with Life scale administered at the 6-month interviews, which asked, “How satisfied are you with the kind and amount of contact you have with the opposite sex?” At the 1- and 2-year interview points we compared, within gender, mean satisfaction scores of individuals who had “had sex” during the past month with those who had not. If the sexual experiences were positive, we expected means to be higher for the sexually active per-
Table 2. Heterosexual behaviors by gender

<table>
<thead>
<tr>
<th></th>
<th>Study entry</th>
<th>6 Months</th>
<th>12 Months</th>
<th>18 Months</th>
<th>24 Months</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>n</td>
<td>%</td>
<td>(No.)</td>
<td>p</td>
<td>n</td>
</tr>
<tr>
<td>Living with a</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>partner</td>
<td>F</td>
<td>40</td>
<td>20.00</td>
<td>(8)</td>
<td>&lt; 0.01</td>
</tr>
<tr>
<td></td>
<td>M</td>
<td>82</td>
<td>2.44</td>
<td>(2)</td>
<td></td>
</tr>
<tr>
<td>Dated in past</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>month³</td>
<td>F</td>
<td>31</td>
<td>32.26</td>
<td>(10)</td>
<td>NS</td>
</tr>
<tr>
<td></td>
<td>M</td>
<td>76</td>
<td>21.05</td>
<td>(16)</td>
<td></td>
</tr>
<tr>
<td>Had sex in past</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>month</td>
<td>F</td>
<td>32</td>
<td>25.0</td>
<td>(8)</td>
<td>&lt; 0.10</td>
</tr>
<tr>
<td></td>
<td>M</td>
<td>81</td>
<td>9.9</td>
<td>(8)</td>
<td></td>
</tr>
<tr>
<td>Global Variable:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lived/dated/kissed/had sex</td>
<td>F</td>
<td>39</td>
<td>53.85</td>
<td>(21)</td>
<td>&lt; 0.10</td>
</tr>
<tr>
<td></td>
<td>M</td>
<td>81</td>
<td>35.80</td>
<td>(29)</td>
<td></td>
</tr>
</tbody>
</table>

Note.—F = female, M = male.

¹χ² tests performed with Yates' correction for continuity; in all tests df = 1.

²Includes only persons not living with a partner.
sons relative to those not active; if the experiences represented victimization, we expected the opposite to be the case. For women at 1 year, there were no differences between the active and nonactive on this satisfaction item; at 2 years, the sexually active women had a significantly more positive mean score than the nonactive women (t = 2.46, df = 27, p < 0.05). For the males, at 1 year there was a trend for the sexually active to be more satisfied than the nonactive (t = 1.88, df = 68, p < 0.10); at 2 years, there was a significant difference in the same direction (t = 3.12, df = 25, p < 0.01). While these data represent group averages and thus do not preclude the possibility that some of the sexual experiences represented victimization, findings are generally supportive of an interpretation that, at least for many, being sexually active was related to higher satisfaction with contact with the opposite sex.

Finally, we examined a global variable (lived with opposite sex or dated or kissed or had sex) to ascertain the proportion of men and women in each group who had some kind of social contact with persons of the opposite sex during the month preceding each interview. Findings (see Table 2) revealed that a significantly greater proportion of women than men had been involved with members of the opposite sex at each time period except study entry; typically 75 percent of the women had had heterosexual experiences at each period relative to approximately 41 percent of the males.

Substance Use. We inquired in the Demographic/History interview whether clients had ever used various street drugs before study entry and, if so, whether such use had resulted in problems for them in various life domains (e.g., legal, social, and family). The large majority of clients said they had used alcohol and cannabis at some time; there were no significant gender differences in the proportion who had used these drugs. There was a trend suggesting that more of the male than female cannabis users had had legal problems as a result of use of this drug (17.91% of the male cannabis users vs. 2.94% of the female cannabis users; χ² = 4.38, df = 1, p < 0.10). There were no gender differences on the proportion who had used a range of other drugs at least once (narcotics, barbiturates, amphetamines, and hallucinogens), except that more of the males (58.23%) than females (35.90%) said they had used LSD at some time (χ² = 4.35, df = 1, p < 0.05).

At the 6-month interviews, we asked clients about their typical frequency of use of alcohol, marijuana, and other street drugs during the preceding 6 months. We compared males and females at each period on the proportion who were "significant users" of substances; a "significant user" was defined as a client who said he or she typically used either alcohol or cannabis or another street drug at least several times a week. At study-enter, 6-month, and 18-month assessments, there were more male than female "significant users" (at study entry, 44.44% of the males vs. 20.51% of the females, χ² = 6.49, df = 1, p < 0.01; at 6 months, 36.11% of males vs. 13.16% of females, χ² = 6.47, df = 1, p < 0.01; at 18 months, 43.06% of males vs. 21.88% of females, χ² = 4.29, df = 1, p < 0.05). These differences were accounted for primarily by greater male use of cannabis. Specifically, when we examined the drugs separately, there were no gender differences on the proportion of persons who used alcohol, or other street drugs, at least several times a week, but significantly more of the males said they used cannabis at least several times a week at the 6-month (χ² = 6.54, df = 1, p < 0.01) and 12-month (χ² = 4.23, df = 1, p < 0.05) periods with a trend (p < 0.10) in the same direction at 18 months. Proportions of self-reported significant users of cannabis at 6 months were 23.61 percent of the males versus 2.63 percent of the females, and, at 12 months, 25.35 percent of the males versus 6.06 percent of the females.

Findings from an intensive substudy of substance use in our study sample (Test et al. 1989) provide additional support for a conclusion that the major gender difference was in cannabis use. This study contained staff ratings of client substance use as well as self-report ratings. Staff rated 58.7 percent of the males and 50.0 percent of the women as significant users of at least one substance according to the same definition provided above. The only significant gender difference was in staff ratings of cannabis use; staff rated 41.3 percent of the males as using cannabis at least several times a week relative to only 11.5 percent of the females (χ² = 5.60, df = 1, p < 0.05). While staff and client ratings of substance use were significantly positively correlated, staff members consistently viewed more clients as "significant users" than the self-reported data revealed. Staff members also viewed substance use to be a problem for almost all of the persons whom they regarded as "significant users."

Arrests. In the Demographic/History interview, clients reported the number of times they had been
arrested from age 18 to study entry. Despite the fact that this "time at risk" was longer for the females than males, there was a trend for a greater proportion of the males to have been arrested at least once (50.64% of the males vs. 32.50% of the females; \( \chi^2 = 3.51, df = 1, p < 0.10 \)). Meanwhile, a significantly greater proportion of the males said they had been arrested two or more times (28.57% vs. 7.50%; \( \chi^2 = 6.96, df = 1, p < 0.01 \)). Significantly more males also said they had spent some time in jail during these adult years before study admission (42.86% vs. 17.95%; \( \chi^2 = 7.11, df = 1, p < 0.01 \)).

We obtained data from the Dane County Sheriff's Department data base on client arrests during the first 2 years of the study. The proportion of males versus females arrested at least once during this period did not differ significantly (36.71% vs. 23.08%), but among persons arrested at least once, males had a higher frequency of arrests during the 2 years than females (mean ± SD arrests: 2.69 ± 2.57 for males, 1.11 ± 0.33 for females; \( t = 3.23, df = 31, p < 0.01 \)). Finally, data on living situations (see above) revealed that more of the males than females had spent some time in jail/penal settings across the initial 2 years of the study (38.16% vs. 18.92%; \( \chi^2 = 4.24, df = 1, p < 0.05 \)).

Suicide. At the time of this writing, the 122 clients have been in the long-term study an average of 8.98 years. During this period, there have been nine definite suicides and one probable suicide, a rate of suicide that is similar to, though slightly less than, that found in other research which suggests that approximately 10 percent of persons with schizophrenia may take their own lives at some point during the first 10 years of their illness (Nyman and Jonsson 1986).

Eight of the nine definite suicides were male; the one probable suicide was female. While the gender difference in definite suicides is not statistically significant (\( \chi^2 = 1.15, df = 1, p < 0.28 \)), differences are difficult to assess because of the low base rate of suicide. The greater number of male suicides in our study sample is consistent with the findings of others (Johns et al. 1986). In an intensive substudy of the eight male suicides (Cohen et al., in press), we found that the suicides, relative to the surviving study males, were significantly younger at age of their first mental health contact and at time of study entry, and at study entry they displayed significantly greater self-reported distress on five of eight scales of the Brief Symptom Inventory (Derogatis and Melisaratos 1983). At the time of death, the mean age of the male suicide clients was 22.9 years (SD = ± 1.9); the age at time of death of the female definite suicide was 29.9 years. She was also a person with very early illness onset, young age at study entry, and high subjective distress at time of admission.

Discussion

This study has examined a number of domains in the lives of young men and young women with schizophrenia or schizophrenia-related disorders across their first 2 years in a long-term study of the treatment of persons with schizophrenia in progressive systems of community care. Results revealed that clients of both sexes were spending the very large majority of their time in the community rather than in inpatient settings. For the study group as a whole, gender differences were not found on time spent in psychiatric settings during the first 2 years, or on the proportion of men and women who required hospitalization at least once. Among the clients hospitalized at least once after study entry, however, the males showed a trend toward greater recidivism and spent significantly more total days in inpatient settings than the females. Women spent more time in inpatient medical settings for nonschizophrenic reasons. Important gender differences and some noteworthy similarities between the sexes were revealed in the community living arena. Specifically, more of the women were involved in parenting children; more of the women lived with a partner of the opposite sex; and far more of the women than men were heterosexual active. Substance use was a significant issue for a large number of persons of both sexes, though marijuana use was more prevalent among the males. A substantial proportion of both the men and the women had been arrested, but among those arrested at least once, more of the males than females revealed a recidivistic pattern. In addition, more of the males had spent some time in jail both before study admission and across the first 2 years. More of the clients who committed suicide were male, though the difference was not statistically significant. Living situations also differed; males resided more days in rooms while women spent more days in apartments. Homelessness was relatively infrequent, but was of similar prevalence in both of the sexes.

A caution regarding the generalizability of these results is the fact that the current study clients were
involved in very progressive community treatment programs. Research elsewhere is required to establish the validity of these gender-relevant findings for clients of similar characteristics in settings where treatment is less comprehensive.

At this stage of our analyses, we have examined primarily bivariate relationships between gender and the various community life domains. Subsequent multivariate analyses will add information about potential contributing factors and will reveal whether the current findings persist after controlling for variables associated with gender such as diagnosis, marital status, and age. Meanwhile, however, it is noteworthy that the commonly found gender differences in social functioning favoring women were also present in the current study, even though the women in our sample are atypically young and therefore may have been more seriously ill than the population of women with schizophrenia. Our results of fewer gender differences than others have found in favor of females on hospitalization variables (e.g., Goldstein 1988) might be a function of this sampling factor. Future analyses of our data related to symptomatology should further illuminate the illness-related similarities or differences between the sexes in our sample.

Meanwhile, attempts to understand the reasons for the gender differences found here should entertain a broad spectrum of potential contributing factors. The similarity of a number of the gender differences to those existing in the general population (e.g., more male arrests, substance use, and suicide) suggests the need to look well beyond illness-related factors for explanatory power. In addition, potential interactions of the illness with factors such as differential community tolerance or differential gender role expectations must also be considered. For instance, greater fear by community members of male deviance might contribute to the more frequent male arrests or hospital recidivism found here; or the common gender role expectations of greater assertiveness for males in sociosexual relationships might make these interactions more difficult and hence less frequent for males than females with schizophrenia, as others have also noted.

Implications for Treatment and Care. Whatever the contributing factors to the gender differences and gender-relevant life issues illuminated here, the study findings have important implications for the community treatment and care of young men and young women with schizophrenic disorders. While the treatment recommendations made here may appear obvious, the frequent dehumanization of persons with serious mental illnesses, along with an emphasis on treating the illness rather than the person with the illness, often results in the gender-relevant needs of these individuals being overlooked (Test and Berlin 1981).

Social relationships, pregnancy, childbirth, and parenting are major and important issues for most women; the current study data remind us that this also is the case for young women with schizophrenia and schizophrenia-related disorders. By the end of the first 2 years in the study (and by an average age of 26.2) approximately 38 percent of these women had had children and most were parenting these children. The study data and our clinical observations suggest that the stresses and burdens on these mothers are enormous—that is, most are raising their children alone, most are poor, some are also working, all suffer the symptoms of severe mental illnesses, and many must periodically relinquish care of their children for reasons related to their illnesses. Thus it is imperative that providers make available special programming and supports to the substantial number of women with schizophrenic disorders who are mothers. Many of these women can benefit from training in parenting skills (Cohler and Musick 1984), as well as from direct assistance with child care and from opportunities which allow some respite each week from parenting responsibilities. Adequate economic support is critical. Further, these women, like all parents, require emotional support to deal with the difficulties and stresses of child rearing; they require extra support in resolving their feelings of loss and guilt when parental responsibility is temporarily or permanently relinquished. We as well as others (e.g., Alyn and Becker 1984) have found that ongoing women's groups (i.e., groups of women clients facilitated by women staff) are quite helpful in these matters; the women clients themselves are a source of great support and assistance to one another.

The study findings revealing that the majority of young women in our sample are involved in heterosexual activities of some kind are important ones for care providers to recognize (see also Coverdale and Aruffo [1989]). It has been our observation that clinicians often deny the fact that persons with severe mental illnesses, particularly women, may be sexually active, and that this denial sometimes contributes to dire consequences for these individuals.
but there often appears to be an adults with serious mental illnesses, provide assistance to women in afford excellent opportunities to groups and long-term one-to-one from the study findings is substance use. Substance use is a frequent topic in the literature on young pregnancy, the consequences of sexually transmitted diseases may be grave. If the heterosexual involvements of these women are to fulfill their potential for meaningful social relationships, providers need to make available to these women opportunities to increase their sexual knowledge, to discuss their values and feelings, and to learn social and assertiveness skills that all of them to exercise choices in the sociosexual area (see programming suggestions in Shaul and Morrey 1980; Alyn and Becker 1984; Berman and Rozensky 1984; Richert and Canosa 1984; Sirkin et al. 1988). Information about AIDS and other sexually transmitted diseases must be routinely provided (Cochran and Mays 1989), and contraceptive materials need to be readily accessible. In our program, we have found that both women's groups and long-term one-to-one relationships with staff members afford excellent opportunities to provide assistance to women in these areas. A final issue important for women skim the study findings is substance use. Substance use is a frequent topic in the literature on young adults with serious mental illnesses, but there often appears to be an assumption that this area is problematic only for young men with these illnesses (e.g., Schwartz and Goldfinger 1981; Safer 1987). Our data suggest that a high proportion of young women with these illnesses are also using street substances to a significant degree. Hence, careful assessment of substance use in female as well as male clients is required, and special interventions for mentally ill persons who also use substances need to be developed (see Test et al. 1989) for treatment recommendations in this area. It is important to note that several additional areas of particular concern to women with serious mental illnesses are not addressed by our data. Among these are health care and victimization (see Bachrach and Nadelson 1988). Study findings also draw attention to some issues of special concern for young men with schizophrenic disorders. In the area of heterosexual relationships, the heterosexual isolation of the majority of these young men stands out. Discussion with these men immediately reveals that "not having a girl friend" is a prominent source of distress for many. Clinicians need to be sensitive to this issue and to provide opportunities both for these young men to share their related feelings and to provide them with direct assistance in the development of meaningful same-sex and opposite-sex relationships. We and others (Sirkin et al. 1988) have found men's groups (e.g., male clients meeting with male staff members on a regular basis) to be useful both as a forum for discussion of feelings as well as an aid in fostering meaningful male-to-male friendships. Social skills training is also helpful, including staff members regularly facilitating informal gatherings of men and women clients to share meals and leisure activities. In the sexual area, it is critical to recognize that a segment of young men with schizophrenia are sexually active. All men with serious mental illnesses, like women, need to be provided with opportunities to increase their knowledge and comfort about sex and their sexuality. Additionally, it is imperative that information about AIDS and other sexually transmitted diseases be systematically provided (Baer et al. 1988; Moffic 1989) and that condoms be made easily available for men with serious mental illnesses both in community and in hospital treatment centers. The fact that half of the men in our sample had been arrested at least once before study entry and that over 40 percent had spent some time in jail before entry is of great concern, especially considering the fact that these men averaged only 22.59 years of age at study admission. High rates of arrest and recidivism for males continued across the first 2 years of the study, despite the fact that persons in this study were in very comprehensive treatment programs. Preliminary analyses of the charges against our clients reveal that serious incidents were very rare; illness-related factors appeared to contribute to many instances of arrest (e.g., for disorderly conduct), while other instances of law-breaking behavior appeared to be economically motivated (e.g., minor thefts). We maintain very close contact with the legal system in our program, which may be one of the reasons that time spent in jail was quite low relative to the large number of arrests. In this era of community treatment, it is apparent that the legal system is a key player.
in the total care system even in communities with well-developed community support systems. If this is acknowledged, education and support to legal system personnel can be provided. Meanwhile, we need to learn much more about the most appropriate and useful responses to instances of minor, but possibly law-breaking, deviance by mentally ill persons in the community.

Substance use was mentioned as an area of concern for women clients and, of course, it is for men as well. While alcohol was the dominant substance used by both male and female clients in our study, cannabis use posed an additional problem for the males. As discussed in Test et al. (1989), it is critical to assess on a highly individualized basis the use and consequences of substance use by clients with serious mental illnesses.

While many persons with serious mental illnesses of both sexes have difficulties finding decent and affordable housing, the findings of other investigators (see review by Seeman [1986]) as well as our own suggest that this may be a greater problem for men than women. The reasons for this difference are not clear, but potential contributing factors may include the fact that men with schizophrenia are more often without a residential partner than women (see table 2) and thus may find rooms to be the only affordable housing. As discussed in our study, cannabis use was common among young men with schizophrenia and we recommend that the suicide risk of this group be evaluated routinely and at frequent intervals. Staff need to be attentive to messages indicative of hopelessness, as our suicide clients and those of others (e.g., Beck et al. 1985) revealed this distress abundantly on self-report research instruments. Perhaps even more difficult than assessment, however, is the task of assisting these young men, whose illnesses interfered with their work and social functioning precisely at the time when male gender role expectations demand that they succeed, to maintain self-esteem and to view their future with some sense of hope. Little is known about how to accomplish this. We are attempting to engage these persons in long-term supportive relationships with staff and to assist them, over time, in learning about and “coming to terms” with their illnesses (Test et al. 1985). Helping these persons find meaningful work, even if only of a very part-time nature, may also be useful. Finally, particularly in light of the demands set by male gender expectations for courageous and “macho” behavior, it may be helpful to pay attention to, and to acknowledge frequently to them, the rather extraordinary courage that both men and women with schizophrenia reveal in doing battle with the painful and devastating symptoms of their illness on a daily basis.

**Research Implications.** Given the large number of gender differences found in this study, it is clear that future research on community care needs to include gender as a key variable in analyses. In addition, the fact that the lives of young men and young women in the community differ significantly holds implications for more basic research investigating gender differences in the longer term outcome of schizophrenia. Research to date indicates that outcome for males is more favorable than that for males (e.g., Lewine 1981, 1988). Illness-related factors, as well as different coping abilities due to the later onset of schizophrenia in women, are most frequently posed as contributing factors. Findings from the current research suggest that environmental variables also need to be considered. That is, while schizophrenia-related illnesses may treat males more cruelly than females, the community in turn may respond more harshly to men with schizophrenic disorders than to women with these illnesses. Factors such as poorer housing, heterosexual isolation, frequent encounters with the law, penal incarcerations, and greater substance use, while perhaps contributed to by the illness, are themselves likely to take a toll on the lives of people with schizophrenia and may further increase the differences in long-term outcome between men and women. Thus, while biological and illness factors are obviously critical to understanding gender differences in
long-term outcome, a more comprehensive knowledge can be reached if research also looks well beyond the illness to consider what else is happening in the lives of these men and women.

References


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