

# Family Connectedness and Women's Sexual Risk Behaviors: Implications for the Prevention/Intervention of STD/HIV Infection\*

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*The present study explores the relationship between connectedness with the inter-generational family and women's sexual risk-taking as a guide to the development of family-focused prevention and intervention. Cross-sectional interview data from a pilot study were analyzed for correlations between a number of self-reported, risky sexual practices, the range of extended family members with whom the respondent was in contact, and awareness of stories pertaining to intergenerational fam-*

*ily history. Structured interviews were administered by female interviewers to 56 women from two contexts: a STD (sexually transmitted disease) Clinic (N = 26), and an inner-city, Hispanic Community Organization (N = 30). Knowledge of stories about grandparents or great-grandparents was a robust predictor of lower sexual risk-taking in the STD Clinic sample. This relationship persisted, but only at the trend level in the Community Organization sample. In both the total sample and the STD subsample, the number of categories of extended family members with whom a respondent was in at least monthly contact was correlated with less sexual risk-taking. Given the fundamental importance of the family system as the primary social unit, these findings argue for further family theory-based research and for its potential application in the development of health prevention and intervention. Implications for practice and future research are discussed.*

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**T**HE disintegration of the family system has been implicated by politicians and the media, as well as by social

scientists as a high-risk factor for social problems such as urban violence, multiple anonymous sex partners, and female poverty. In recent years, health policy planners have come to recognize the importance of the family system—"integrity of the family" and "family values"—for social health and community functioning (Institute of Medicine, 1994). Evidence is mounting that the family system is a major factor in individual health (Campbell, 1986; Harvey & Bray, 1991; McDaniel, Campbell, & Seaburn, 1990; Minuchin, Rosman, & Baker, 1978; Rolland, 1987, 1994; Stierlin & Weber, 1989; Tienari, Wynne, Moring, et al., 1994; Wellisch, 1992). In light of this converging research, the question arises as to whether intergenerational family connectedness (indexed through both the number of extended family members with whom one is in regular contact, and knowledge of family history) might be related to sexual risk-taking in women who are at high risk for STD/HIV infection.

### The STD/HIV Connection

Recently, the Institute of Medicine of the National Academy of Sciences issued a report on preventive intervention research. A major goal stressed by the report was that future research should focus on potentially modifiable biological and psychosocial risk factors (Institute of Medicine, 1994). One biological risk factor is the incidence and prevalence of pathogens causing sexually transmitted diseases (STDs), including human immunodeficiency virus (HIV), within a specific geographic area. There is strong evidence in the international literature that links STDs with an increased risk of HIV infection because of the coexistence of causative agents and factors of "epidemiologic synergy" (Aral & Holmes, 1991; Wasserheit, 1992). Psychosocial factors include substance abuse, multiple sex partners, unprotected sexual intercourse,

prostitution, and living in a high-risk community or core population (Millstein, Moscicki, & Broering, 1993). Further, it is important to note that all the aforementioned risks are potentially modifiable.

Aral and Holmes (1991) discuss the steep increase in syphilis infections among African-American women and men in the US since 1985. Although syphilis and gonorrhea have decreased among adult white heterosexuals, bacterial and viral STDs have increased among young inner-city poor populations. Both types of STD are markers of the spread of HIV infection in a population (Holmes, Cates, Lemon, & Stamm, 1990); subsequently, HIV has become the leading cause of death for individuals 25 to 44 years of age, with minority groups significantly overrepresented. The rates of HIV infection in women have paralleled the increasing proportion of heterosexually acquired cases (Centers for Disease Control and Prevention, 1995). AIDS cases among women rose from 11% of reported cases in 1989 to 20% in 1996, and AIDS is now the third leading cause of death among US women aged 25 to 44 years. At least 40% of female AIDS cases result from heterosexual transmission, surpassing injecting drug use. Seventy-eight percent of women with AIDS are African American or Hispanic. These trends may create a need for public health-care and preventive interventions that is likely to exceed the capacity of current systems to provide diagnostic and treatment services (Aral & Holmes, 1991).

At the time of our study (1991–92), the population in that upstate New York area had rates of gonorrhea and syphilis infection that were fifth and eighth, respectively, in the US, according to 1992 CDC figures. Local STD clinics saw a 1,000 percent increase in syphilis cases between 1986 and 1990. The region's cumulative total of 1,160 AIDS cases for its four metropolitan areas (Albany, Buffalo, Roch-

ester, and Syracuse) is higher than more than half the states in the United States (Division of STD/HIV Prevention, Centers for Disease Control and Prevention, 1993). These national and regional data provide compelling evidence that young minority women living in areas with high rates of STDs are at markedly increased risk for HIV infection.

### STD/HIV Prevention

Changes in the nature of STDs in the US in the 1980s prompted new considerations in the formulation of "Year 2000 National Health Objectives" (US Public Health Service, 1991). Available resources for the control of STDs had been overwhelmed, suggesting that future control would require greater use of psychosocial resources. The need became clear that more active recruitment of patients as key players in disease intervention was required (Cates, 1986). Emphasis shifted toward behavior change as the basis for prevention of disability and morbidity, and toward primary prevention measures (Prochaska, DiClemente, & Norcross, 1992). A report showed that more than 33% of individuals at high risk continued to engage in sexual activity despite knowledge of STD/HIV symptoms and exposure, and that the group exhibited a constellation of risk-taking behaviors (Upchurch, Brady, Reichart, & Hook, 1990).

Such observations suggest that more effective preventive efforts might include behavioral interventions concerned with general risk reduction rather than a focus on single aspects of health problems (Kelly, Murphy, Sikkema, & Kalichman, 1993; Rotheram-Borus, Koopman, Haignere, & Davies, 1991). Personalizing the risks appears to be correlated more with behavior change than does the development of generalized fear (Thurman & Franklin, 1990). Millstein and her colleagues (1993) identified different configurations of risk factors for HIV exposure in subsets of adoles-

cents, supporting the view that a variety of behavioral risk reduction strategies are needed. Accordingly, some key factors that underlie behavior, such as family contact, family mores, and family/individual cultural dispersion need to be addressed (Oetting & Beauvais, 1990–91). Such factors hold promise of understanding why some individuals are motivated to change their behavior while others persist in clearly health-threatening or self-destructive behaviors. If we are to accomplish Objective 18.9 (concerning AIDS/HIV) of the National Health Objectives, it will be essential to identify the role of families in reducing sexual risk-taking (US Public Health Service, 1991). In 1996, the National Institutes of Mental Health (NIMH) pre-conference satellite of the 11th International AIDS Conference, "Role of Families in Preventing and Adapting to HIV/AIDS," focused on the role of family relationships in dealing with issues of prevention and intervention. The International Conference called for work with families as the cutting-edge approach to curbing the spread of HIV infection.

### Family and Socioeconomic Factors

Medical historian, Mirko Grmek, in his 1990 *History of AIDS*, listed changes that have facilitated the spread of retroviruses such as the lentivirus HIV-1 and HIV-2. He took a systems view, ranging from the molecular level of virology research, through changes in family mores, to socioeconomic factors such as migration. One of the factors he explored was the economically motivated dislocation in Central Africa that propelled tribal villagers into the large metropolises of developing countries. These villagers had functioned for centuries under a tradition of multiple sex partners that nevertheless was constrained by family values and cultural traditions. Only certain designated individuals were appropriate sex partners, forming a small and restricted circle of

individuals who were sexually active with each other. Close family ties reinforced this constraint on sexual behavior, limiting the spread of STDs. However, when some of these villagers migrated to large cities, the family and tribal restraints were removed. Any unmarried, unrelated individual in the city became an acceptable sexual partner, which led to a significant increase in STDs. AIDS/HIV was one of the diseases, the transmission of which was highly accelerated by this breakdown of family and tribal constraint. Aral and Holmes (1991) noted changes in American inner cities that resembled Grmek's descriptions: rapid demographic shifts, high population growth rates, population movements, drastic economic changes, unstable power hierarchies, high levels of transience, and marginality. Such changes obviously affect the integrity and functioning of families.

Ewald (1993) described a natural experiment supporting Grmek's identification of the family as an important factor in risk behavior. He noted the difference in prevalence of HIV-1 and increased virulence of HIV-2, between Senegal and Ivory Coast. In Senegal, the family remains organized in both the tribal area and the new large cities, so that individuals leaving the rural area are able to keep in close contact with their families. A mild form of HIV-2 was most common in Senegal, with mortality occurring late in age. The incidence of HIV-1 was quite low. This contrasted with Ivory Coast, where family contact had broken down, along with constraints on sexual behavior. As a result, a particularly virulent strain of HIV-1 was almost endemic, along with rare cases of a more virulent HIV-2. DeCock, who headed the AIDS/HIV program in that country, described the situation as grim: "AIDS is winning" (DeCock, Baerere, Diaby, et al., 1990).

### **Multigenerational Family Factors**

Family factors and relationships (nuclear and multigenerational) are known to influence behavior and health (Boss & Greenberg, 1984; Boyd-Franklin, Steiner, & Boland, 1995; Campbell, 1986; Cole & Reiss, 1993; Doherty & Campbell, 1988; Green, 1996; Landau-Stanton & Clements, 1993; Reiss, Gonzales, & Kramer, 1986; Rolland, 1987; Stanton, Todd, & Associates, 1982). There is evidence that such factors can also influence sexual risk-taking and health-seeking behaviors (Campbell & Patterson, 1995; Jessor, 1993; Jessor, van der Boss, Vanderyn, et al., 1995; McGrath, Rwabukwali, Schumann, et al., 1994; Rotheram-Borus, 1996; Szapocznik, 1996). Blum's 1972 studies of adolescents at high and low risk for substance abuse showed that families of low-risk adolescents had a sense of family heritage and history, whereas the high-risk families did not. These findings are corroborated by the subsequent family research of Baumrind (1991) on adolescent drug use and other problematic behaviors. Additional support emerges from research on pregnant adolescents by Boyce, Schaefer, and Uitti (1985). They found that a sense of "permanence" (stability of family relationships and importance of geographic place) was a key variable in predicting neonatal complications. The greater the sense of permanence, the greater was the subject's positive affect and the less likely her infant would develop neonatal complications. This was preliminary evidence that a sense of continuity and stability in family, social relationships, and environment "is a salient factor in the complex relationship between stress, social support, and child health" (Boyce et al., 1985, p. 1285).

Stated differently, families who know where they come from, and who are not cut off from their heritage, may be better able to maintain stability and navigate

the risks of modern life (Landau, 1982). A family's heritage, values, and predominant form (e.g., matriarchal vs. patriarchal) can have profound bearing on the kinds of stresses and risks it encounters and how it handles them. Migration provides a case example. In reviewing the literature, Stanton and colleagues concluded that there is a much higher rate of substance abuse in the offspring of families that have migrated 200 or more miles from their home towns (Stanton, Todd, & Associates, 1982). It is likely that migration threatens connections within the intergenerational family, thus increasing the likelihood of risk-taking behavior.

### Family Themes

Landau-Stanton and Stanton have for many years been examining the contribution of multigenerational family patterns to present-day behavior (Landau-Stanton, 1990). Families develop concepts of themselves—family “themes,” “myths, or “scripts”—that subsequently get passed on to their descendants (Bennet, Wolin & McAvity, 1991; Boszormenyi-Nagy & Spark, 1973; Byng-Hall, 1995; Feinstein & Krippner, 1989; Ferreira, 1963, 1966; Framo, 1982; Papp & Imber-Black, 1996; Reiss, 1981; Selvini-Palazzoli, Boscolo, Cecchin, & Prata, 1978; Stierlin, 1973). Watzlawick (1978) explained family dynamics on the basis of their “world image.” Such family “themes” may pertain to ethnicity, culture, vocation, recreational pursuit, shared values, notable deeds by ancestors, stories or legends of family experiences. These themes mark each family as distinctive, separating it from other families and providing its members with a sense of shared identity. They form the basis of relationships (Bagarozzi & Anderson, 1989) and family belief systems (Dallos, 1991; Steinglass, 1978); they remind the world, and the family members themselves, that “We are unique, and

it is because of [theme] that we are what we are.”

Family themes also provide a sense of continuity, connecting the family of today with its forebears. Themes are threads to the past—they highlight unresolved family transitions (Seltzer & Seltzer, 1983). Commonly they are transmitted through the oral tradition of passing down family “stories” about the actions or experiences of forebears (Laird, 1989; Roberts, 1994). The presence or absence of such stories and the language used to transmit them can thus serve as a rough but simple marker of family theme continuity, as well as a powerful method of effecting family change (Anderson & Goolishian, 1988; Epston & White, 1992; Friedman & Combs, 1996; Gilligan & Price, 1993; Hoffman, 1985, 1993; O'Hanlon, 1994; Paré, 1996; Reiss, 1981; White & Epston, 1990).

### Rationale

Similar to the intergenerational transmission of parenting (caretaking) behavior (Ricks, 1985), factors influencing an individual's ability to engage in self-care (Orem, 1983) may also be carried across generations. Some investigators believe that certain aspects of family functioning that may influence health behaviors are amenable to change (Climent, de Aragon, & Plutchik, 1989; Williamson, 1991). The present pilot study focuses on *contact* with the extended family system, and *continuity* within the multigenerational family (indexed through knowledge of family history). The primary research question asks whether connectedness with the extended, multigenerational family is related to reduced risk of STDs, including HIV, in a population that shares many biological and psychosocial risk factors.

This pilot study was conducted in order to explore and operationalize family variables, and to test the relationships between these variables and sexual risk-

taking. The study addressed the following questions:

1. Would the women answer questions about their sexual behavior candidly, especially in the context of an interview also designed to inquire about their relationships with their families? (We were concerned that this juxtaposition of questions would make our subjects uncomfortable and they would refuse to participate).

2. How much variance in sexual risk-taking could we detect from these self-reports? Although we believed that women interviewed in a public STD Clinic would acknowledge a prior STD, it was unclear whether they would acknowledge other risky or illegal sexual behaviors. Further, would women interviewed in another (non-STD clinic) context acknowledge risky sexual behavior or prior STDs?

3. Would there be much variety in the extent of family contact reported by the women sampled? Would STD Clinic women tend to report total estrangement from their families? Or, in contrast, would nearly all of them report some knowledge of family history? Would we be able to construct an interview and calibrate a scale that could detect the variance that might exist?

4. Could we demonstrate a relationship between sexual risk-taking, family contact, and knowledge of family history? Are family contact and knowledge of family history two aspects of the same underlying dimension, or do they relate independently to sexual risk-taking?

5. To what extent are these relationships related to other psychosocial factors? For example, are family contact and family knowledge related only to sexual risk-taking for those women who have completed relatively higher levels of education where, presumably, there are higher expectations for self-actualization?

## METHODS

### Sample

The total sample of 56 was drawn from two relatively distinct populations located at two sites: 26 women who had sought a diagnosis and/or treatment for an STD at a county health department clinic (Clinic), and 30 women receiving services at a community organization (Community Organization) serving Hispanic women, children, and families.

### Procedures

The structured interview contained five sections:

1. *Demographics*: Age, race, religion, country of birth, education, marital status, public assistance.

2. *Personal History*: Previous marriages, employment history, childbearing history, prior illnesses, arrests.

3. *Family Contact* (FAMCON-A): Frequency of contact in any of three modalities (face-to-face, letter, telephone) with 15 categories of family member was coded for each subject in order to identify with how many categories of family member the women had weekly or monthly contact. The categories of family member included: mother, father, mother's father, father's mother, maternal great-grandparents, paternal great-grandparents, biological siblings, stepsiblings, aunts, uncles, et cetera. The original stimulus for exploring the relationship between contact with extended-family members and sexual risk-taking was our clinical experience, which gave us the impression that women who were in contact with their family members appeared to be more protective of themselves. The findings of Stanton et al. (1982) showing that serious drug abusers were more in contact with their families than had been previously recognized—and, in fact, had more frequent contact than their nondrug abusing counter-

parts—gave additional support to the idea that family contact might also be related to sexual risk-taking. Adapting Stanton et al.'s (1982) techniques of measuring the frequency of contact between male heroin addicts and their parents, we calculated the following variables: (a) the number of categories of family members with whom the women reported at least weekly contact, and (b) the number of categories of family members with whom they had at least monthly contact (which also included those contacted weekly). If a family member was deceased, we indexed the frequency of contact while she or he was alive.

4. *Knowledge of Family History (FAMCON-B)*: Refers to knowledge of any stories (versus mere "qualities" or "traits") about any grandparents or great-grandparents. If stories were known, the woman was asked whom they were about. The measure of family knowledge was scored 0 if she knew of no stories about any grandparent or great-grandparent; 1 if she knew a story about one of those two generations but not the other; and 2 if she could recall a story about both generations.

5. *Sexual History*: One point was given for each of four indicators of high-risk behavior; (a) the last sexual partner was someone new to her and did not use a condom, (b) she had more than one sexual partner in the last month without using a condom, (c) her regular partner was not monogamous and did not use a condom, (d) she reported having traded sex for either drugs or money. The index of STD risk ranged from 0 to 4. We also asked whether or not the women had a history of STD, about the number of sexual partners in the previous month and 6 months, condom and other contraceptive use, and other risk behaviors (specifically anal intercourse, and contact with a bisexual partner or a partner who has injected drugs). This instrument was developed

and validated in an earlier research project, the NIMH-funded University of Rochester AIDS Training Program (Landau-Stanton, Clements, Cole, et al., 1991) and included items adapted from Erhart and Meyer-Bahlberg's (1989) sexual risk behavior assessment schedule.

All but seven of the women were approached in the waiting rooms of the two sites by a young Hispanic woman who explained that we were conducting a study of families and sexually transmitted disease. She also explained that she would conduct only one interview (there would be no followup), and that the survey would be completely anonymous. All women ( $N = 49$ ) who were in the waiting room of either agency at the time of the survey were approached. None refused to participate. The remaining seven women were interviewed by the STD Clinic nurses as part of their standard sexual history taking. No women refused that interview either ( $TN = 56$ ).

## RESULTS

Table 1 contains a summary of the demographic characteristics of the sample. The women ranged in age from 16 through 62 years of age. Only one woman was older than 43 years of age. All of those women classified as Hispanic were white. All but two of the Clinic subsample were born in the US. The remaining two were born in Puerto Rico. Half of the Community Organization subsample was born in Puerto Rico, four were born in the Dominican Republic, and the rest were born in the US. The birthplace of two women was unknown.

The sample included a wide range of educational levels across the two groups. However, the groups did not differ significantly on this dimension. Marital status for the two groups was: (a) married and living with a spouse—Clinic = 17%, Com-

munity Organization = 33%; (b) separated or divorced—Clinic = 54%, Community Organization = 16%; (c) never married—Clinic = 38%, Community Organization = 47%.

### Sexual Risk-Taking

There were obvious and striking differences between the subsamples: 73% of the women interviewed at the Clinic reported a history of suspected or confirmed STD, compared with only 24% of the Community Organization sample ( $t = 3.94$ ,  $p < .001$ ). The Clinic women had clearly engaged in some behavior that placed them at risk for an STD infection, including risk for HIV. Some women who had a history of STD, however, no longer engaged in high-risk behavior, and conversely, some women who had not had an STD were nevertheless engaged in high-risk behavior. The mean sex-risk score was significantly greater in the Clinic subsample ( $t = 3.03$ ,  $p < .01$ ).

### Family Knowledge/Family Contact

The mean score on family knowledge for the total sample was 1.0. The means for both subsamples were exactly the same,

namely, 1.0. Overall, the women interviewed reported at least weekly contact with slightly less than 3 (2.87) categories of family members, and at least monthly contact (including weekly) with slightly over 4 (4.3) categories of family members. The two groups did not differ significantly on either of the indicators of family contact (see Table 1).

Family knowledge was related to both weekly contact ( $r = .22$ ,  $p = .10$ ) and monthly contact ( $r = .24$ ,  $p = .08$ ). Even though there was a trend toward a positive correlation, knowledge and contact seemed to be independent dimensions since they shared relatively little common variance.

### Knowledge/Contact/Sexual Risk-Taking

As shown in Table 2, there are striking differences between the subsamples in the relationships between the variables. In the STD Clinic sample, knowledge of family stories is strongly and negatively related to sexual risk-taking ( $p < .001$ ). This association was mirrored in the Community Organization sample, but only at the level of a trend ( $p < .10$ ). This difference is largely a result of the much

TABLE 1  
*Characteristics of the Sample*

Variable	Total Sample (N = 56) Mean (SD)	STD Sample (n = 26) Mean (SD)	Community Org. Sample (n = 30) Mean (SD)
Age	27.9 (9.0)	27.8 (7.8)	28.1 (10.0)
Sex Risk	1.0 (1.0)	1.4 (1.0)	0.7 (0.9)
# Family Members in			
Monthly Contact	4.3 (2.0)	4.0 (2.2)	4.5 (1.8)
Weekly Contact	2.9 (1.9)	2.9 (2.3)	2.9 (1.6)
Race (percent)			
Black	32%	67%	4%
Latina	60%	17%	96%
White	8%	17%	0%
Education (percent)			
<HS Graduate	44%	48%	43%
HS Graduate	30%	32%	27%
Some College	25%	20%	30%



lower level and smaller variance in sexual risk-taking within the Community Organization group. In the total sample, monthly contact and sexual risk-taking were moderately and negatively correlated. These variables were not significantly correlated in the Community Organization group. While negatively correlated, the association between monthly contact and sexual risk-taking in the STD sample achieved only a significance level of  $p < .10$ .

Given sufficient variance in sexual risk-taking that one finds in the high-risk sample attending the STD Clinic, family knowledge and contact are related to sexual risk-taking. Multiple regression revealed that 31% of the variance in the STD Clinic sexual risk-taking scores was accounted for by knowledge of family stories and monthly contact. Only 2 of the 56 subjects had less than yearly contact with any family member. Family knowledge accounted for the majority of the variance (Beta =  $-.581$ ,  $t = -3.1$ ,  $p = .005$ ). The interaction between knowledge and contact was not significant.

A one-way analysis of variance in sexual risk-taking for the STD sample was conducted. Women who reported knowing stories about one or both of the grandparent and/or great-grandparent generations had significantly lower sexual risk-taking (1.14 for those knowing stories about one generation, and .67 for those knowing stories about two generations) when compared with women who reported knowing no stories (sex risk = 2.50;  $F = 7.88$ ,  $p = .002$ ). This concurs with and extends

to adults in Blum's 1972 finding that a sense of family heritage may be protective against risk. Neither multiple regression nor analyses of variance revealed any significant differences among these variables in the total sample, or the Community Organization subsample.

Thus, even in a relatively low-risk group such as our Community Organization subsample, monthly contact—perhaps a more reasonable measure of extended family contact than weekly contact since many of the close relatives lived outside the US—is related to sexual risk-taking. With larger sample sizes, there would be sufficient power to detect statistically significant correlations.

## DISCUSSION

The pilot data support the possibility that both family knowledge and contact are related to lower levels of sexual risk-taking. A possible mechanism through which this relationship operates is suggested: families that (a) have a core set of values or standards that may get communicated through family stories, or (b) possess both closer ties and a stronger sense of belonging reflected in the telling of family stories, could be expected to have a stronger inhibiting effect on sexual risk-taking compared to families with an ambiguous or weaker set of standards. Further, infrequent or nonexistent family contact may be indicative of the kind of dysfunction-engendering “emotional cut-off” described by Bowen (1978). We intend to explore these speculations further

TABLE 2  
*Correlations Between Family Knowledge, Contact, and Sexual Risk-Taking*

Sex Risk	Family Knowledge	Monthly Contact	Weekly Contact
Total Sample	-0.19	-0.31 <sup>a</sup>	-0.11
STD Clinic	-0.60 <sup>c</sup>	-0.31 <sup>b</sup>	-0.25
Community Org.	-0.30 <sup>a</sup>	-0.18	-0.16

Note: Pearson product moment correlations, one-tail tests of significance; <sup>a</sup>  $p < .10$ ; <sup>b</sup>  $p < .05$ ; <sup>c</sup>  $p < .001$ .

through content analysis of family stories (Tuttle & Landau, 1995). We will specifically examine associations between level of sexual risk-taking and themes of resilience and vulnerability in intergenerational stories.

This study indicates that family contact, family knowledge, and sexual risk-taking behavior are measurable. As expected, several notable sample differences also emerged, with the subsample of women at considerable risk for STD/HIV infection (that is, those who attend a public STD Clinic) showing greater variability. The factors responsible for this difference may be related to sample size—more risk-taking behaviors yield more variability. However, variability might be related to the differences in the population. For instance, the weaker correlation between variables in the Community Organization group may be due to cultural differences between them and the Clinic patients. Or, the correlation might be differentially affected by the fact that so many more of the Community Organization group came from outside the US, thus being unable to maintain as predictable or consistent contact with extended family members as could the Clinic sample (most of whose families resided in the US).

Given a large enough sample, one could determine whether similar relationships between factors, as found in the higher-risk Clinic group, also hold for women at lower risk. Other areas for future exploration include (a) the replicability of these results in a larger sample; (b) the further specification of mechanisms linking family contact and knowledge of family history to sexual risk-taking; (c) statistical interactions between family knowledge, family contact, age, and level of acculturation; (d) methods for enhancing these familial links, thus working toward lasting changes in sexual risk-taking behavior through altering the family system; and

(e) further exploration of family intergenerational themes and the effects of specific family values, expectations, and culture on the importance and nature of these relationships.

The individual's knowledge about the health risks in specific sexual behaviors does not automatically change that behavior. There has been some success with modifying attitudes and behaviors regarding AIDS/HIV (Aggleton, Davies, & Hart, 1995; Bor & Elford, 1994; Kelly, et al., 1993; Seligson & Peterson, 1992), but little encouraging research on lasting behavior change. New, practical clinical interventions are needed that take into account the psychological complexity of risk-taking behaviors in order to effect primary behavior change.

The present pilot study examines some familial factors in STD/HIV infection that may play a potential role in preventive intervention. Family continuity and family contact over space and time may provide the same protection against high risk-taking sexual behaviors as that observed, for instance, in Senegal. However, as with most correlational data, the direction of causality is not clarified in this pilot study. For instance, are those women with little or no family contact or knowledge seen by kin as difficult people or "trouble-makers," and therefore shunned? Or, were the women physically and/or sexually abused, or from substance-abusing or otherwise problematic families, and themselves initiated and maintained the cut-off? Or, from a systems viewpoint, are both these explanations mainly or partly true, while each on its own is limited? In other words, each explanation addresses a part of an interactive system in which the women and at least some family members are both shunners and the shunned. From this perspective, the various members of the relationship system all contribute interactively to the pattern—to avoid or

ignore someone is as much a behavior as is smiling at them—and are therefore essentially inseparable: the pattern would not exist without their various contributions to it. Thus, we would be talking about a phenomenon that is inclusive of the people involved, their actual behaviors, and the pattern that unites them. In terms of prevention, the question then becomes how to alter the interaction so that the pattern can change.

A possible implication of these findings concerns reconnection. Finding ways to reunite or reconnect risk-taking women with supportive members of their extended families could serve a preventive function. A clinical approach that our group has used in such instances is Transitional Family Theory, which is an integrative model of prevention and intervention. Application of this model to increase family and community connectedness in Argentina has resulted in a 400% increase in the number of young substance abusers seeking treatment, along with a marked increase in health-seeking behaviors among other citizens (Landau, Stanton, & Yaria, 1996; Yaria, 1995). Similarly, A Relational Interventional Sequence for Engagement (ARISE), another application of the Transitional approach that is based on the principle of enhancing family connectedness, has also resulted in a marked increase in mobilizing the family and social support network in engaging addicts in treatment (Garrett, Landau-Stanton, Stanton, et al., 1997; Garrett, Landau, Stanton, et al., 1998; Garrett, Stanton, Landau, et al., 1999; Landau, Garrett, Shea, et al., 2000; Landau, Stanton, Garrett, et al., 2000).

Given the fundamental importance of the family system as a primary institution in society, these findings provide argument both for additional family theory-based research, and for the application of

such research to the development of public health interventions.

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