Part IV.

Stressful Community Contexts: On Multidimensional and Salient Concepts

Chapter 15

Where Does Social Support Come From? The Social Network Basis of Interpersonal Resources for Coping With Stress*

Barry Wellman and Milena Gulia
Centre for Urban and Community Studies, University of Toronto

Personal Communities/Networks of Social Support

The Persistence of Interpersonal Support

When North Americans need help, where do they turn? They could buy many kinds of help in the *marketplace,* but the cost might be too expensive and not be sensitively suited to their needs. They could obtain help from governments and other organizations, just as most people obtain education, but such *institutional distributions* often are in short supply and may require difficult dealings with complex bureaucracies. They could *coercively appropriate* helpful resources through theft or force, but this is only possible for unskilled services, material goods and information, and the social control of such deviant behavior may cause more stress than the

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coercion alleviates. They could help themselves by making goods or doing services (as peasants have historically done), but such *self-provisioning* cannot produce many of the complex material and intangible resources that people now need.

North Americans obtain many helpful resources by means of *social support*. They use their *interpersonal relations* to meet a wide variety of their needs: emotional aid, material aid (goods, services and money), information, companionship. Such interpersonal provision of supportive resources is a key constituent of social life. It includes, but is much broader than, the principal focus of American social scientists: the effects of emotional support on stress, health, and health care (see the review in Gottlieb & Selby, 1990). *Our primary concern in this chapter is with the kinds of networks and relationships that tend to provide different kinds of support. However, we also consider briefly how the very networks that provide support may also be sources of personal problems.*

Supportive Communities are Personal Networks

Although scholars used to think that a (post)industrial loss of community had dried up interpersonal sources of support, we now know that community has stood up well to the large-scale social transformations of urbanization, industrialization, bureaucratization, technological change, capitalism, and socialism (See the reviews in Fischer, 1976, 1982; Goldthorpe, 1987; Lee, 1980; Mogey, 1977; Sussman & Burchinal, 1962; Wellman, 1988, 1990, 1992b, 1994; Wellman & Leighton, 1979). Although few North Americans are embedded in densely knit, tightly bounded villages-- urban or rural--, most are enmeshed in ramified, supportive personal communities. Analysts have learned that kith and kin are not relics from a pastoral past but are active arrangements for helping individuals and households deal with stresses and opportunities (Wellman, 1988, 1990, 1992b; Willmott, 1987).

The residents of Western societies usually know few neighbors, and most of their personal communities live outside of their neighborhoods. A sizeable minority of active community ties stretch even farther than the metropolitan area. People easily maintain far-flung relationships by telecommunications-- with telephones now being

supplemented by faxes and electronic mail--.and transportation based on cars, public transit and airplanes. *In Toronto, the neighborhood is no longer the effective boundary for frequent face-to-face contact and delivery of supportive goods and services*. Frequency of contact and the percentage of network members delivering goods and services do not start decreasing until network members live 30 miles away, which roughly corresponds to an hour's drive or being within the local flat-rate telephone calling zone (Wellman, Carrington, & Hall, 1988; Wellman & Wortley, 1990). *Friends comprise the largest segment of the active ties in these networks, but neighbors and coworkers dominate daily meetings* (Wellman, 1996), *with many kin also being important network members*.

In the past two decades, social network analysis has led sociology away from sterile polemics about whether modern times have destroyed community (Wellman & Leighton, 1979). The organizing concept of the *personal community network* has led analysts to study the composition, structure, and contents of people's ties with friends, kin, neighbors, workmates and acquaintances, wherever located and whomever with. *Analysts no longer start with the a priori assumption that communities must be tightly bounded, densely knit, broadly supportive solidarities, nor do they limit their searches for community to neighborhoods, workplaces, and kinship groups*. Research has shown that most people have sizeable personal community networks with complex structures and variegated compositions. These networks provide a wide range of supportive resources that are important to the lives of both the recipients and the providers.

Communities operate now as private personal communities rather than as public collectivities, and people have come to rely heavily on their active community ties for informal help (Wellman, 1992a). Social network analysis treats these personal communities as networks whose composition, structure, and contents are defined from the standpoint of (a usually large sample of) focal individuals at their centers. Such studies present Ptolemaic views of the network universe as experienced by the focal persons at their centers. *Analysts have been centrally concerned with understanding how the composition and patterns of relations in these personal community networks*

affect the ways in which resources flow to their members.

Personal community networks come in all shapes, sizes, and flavors: large and densely knit extended families, sparsely connected and fragmented sets of friends, small self-reliant clusters, etc. The ties in these communities vary markedly in strength, typically consisting of 3 to 6 socially close intimate ties, 5 to 15 somewhat less strong but still significant ties, and over 1,000 acquaintances and latent (but often still mobilizable) relationships. *Although not all ties and networks are supportive, most ties do provide some kind of "social support," and most networks provide a range of assistance that is often low-cost, flexible, effective, and quickly available* (Wellman, 1992b). Even if we restrict our attention to a person's most active ties (those that are intimate or significant), these 10 to 20 ties usually provide network members with an important share of their resources along with what they purchase or get from household members, formal organizations, and the state.

A key question for us is how the complex variation in the size, composition, and structure of these complex networks is related to the quantity and quality of the social support they deliver. Our group's research (Wellman & Potter, 1997) suggests that personal community networks basically vary along four dimensions:

- ***Range:*** How large and heterogeneous are these networks? Does high range mean that networks have more resources--.and more diverse resources--.available?

- ***Availability***: How available for contact are network members so that they can easily receive information about each other's needs? Does high availability mean that they can conveniently deliver instrumental aid?

- ***Densely Knit Kin/Sparsely Knit Friends***: Are network members bound by densely knit, normative ties of obligation and social control or sparsely knit, voluntary ties of companionable shared interests?

- ***Composition***: To what extent are these networks composed of women, who tend to offer much emotional support, or people of high socioeconomic status, who tend to have more material resources available?

This chapter's main thrust is to see how these different dimensions of personal community networks are associated with the networks' provision of various kinds of social support.

Stress, Support, and Well-Being

Until recently, the nature of *support* itself has largely remained an unanalyzed, antecedent "black box." *Most scholars originally treated it as a single, unidimensional phenomenon.* They viewed it as a generalized resource (whose precise manifestations might vary by circumstances) available from "supportive" members of social networks (e.g., Wellman, 1979). In recent years, analysts have developed more differentiated typologies, distinguishing among such types of support as *empathetic understanding*, *emotional support*, *material aid* (goods, money, and services), and *information provision* (Barrera & Ainlay, 1983; Tardy, 1985). *They have come to look more at the specific resources flowing through networks than at the general potential for network members to be supportive.*

Since the late 1970s, researchers have been interested in the relationship between the social support found in personal communities and physiological and psychological well being (Cassel, 1976; Cobb, 1976). *Researchers have generally been more interested in the outcomes of support--- its implications for well being--. than its sources*. They have focused on the effects of support, arguing that it appears to make individuals healthier, feel better, cope better with chronic and acute difficulties, and live longer. However, analysts have given much less attention to our topic here, how interpersonal phenomena foster social support.

Concerned with demonstrating the therapeutic effects of support, researchers have refined concepts and measures of acute stress, chronic strain, consequent physical and mental distress, and compensatory coping behavior (Berkman, 1984; Dohrenwend & Dohrenwend, 1984; Lazarus & Folkman, 1984).[1] They have claimed

[1] Because such stresses were usually identified as related to health, psychological functioning, or interpersonal relations (e.g., Holmes & Rahe, 1967), it is not surprising that the proposed remedies fall into these domains. Yet significant gaps remained in these largely American formulations, such as stresses caused by the threat (or experience) of war or by the lack of food, clothing, or shelter.

that the evidence indicates a process in which social support may be a protective factor in alleviating the physiological and psychological consequences of exposure to stressors. They have argued that support prevents people from encountering stress, "buffers" them from experiencing the full brunt if stress is encountered, and steers them to help from formal and informal caregivers. *Thus, social support is seen as one among many factors that can affect a person's ability to resist disease in the face of acute and chronic stress* (Pearlin, 1989).

Fueled by comparatively large funding from health care agencies, social scientists have launched many studies of how such support promotes physical and mental health. Until about a decade ago, such research had several unfortunate characteristics:

1. It implicitly assumed that social support itself was *a unidimensional phenomenon*, a broad array of informally provided emotional aid, material aid, and companionship, largely provided by the active members of personal community networks.

2. It assumed that *just about all active ties were broadly supportive*.

3. It analyzed *social support* as *an interpersonal duet between sender and receiver*, without taking into account the networks in which such relationships are embedded.

4. It concentrated almost entirely on the funding agencies' chief preoccupation--the health-maintaining consequences of social support. It *took for granted the factors that led to the provision of social support.*

We *now know that the first three assumptions are not true*. Network members specialize in the kinds of support they provide. Some provide mostly emotional aid or material aid or only companionship. Some provide little or no social support.

Recent work has gone from sensitizing statements to more rigorous formulations of support and analyses of its consequences. For example, Lin, Dean, and Ensel (1986) used a battery of validated measures to show the relationship of expressive support to depression. They define support as the "perceived or actual instrumental and/or

expressive provisions supplied by the community, social networks, and confiding partners" (p. 18). Much empirical research linking stress and support has been done (see the reviews in Berkman, 1984; Gottlieb & Selby, 1990; House, Landis, & Umberson, 1988; House, Umberson, & Landis, 1988; Lin & Ensel, 1989; Tijhuis, 1994; Wellman, 1992b). *Although results are mixed, on balance there appears to be a positive relationship between receiving higher levels of social support and having better physical health, although researchers have not yet found a clear relationship to morbidity and mortality with reference to specific diseases.*

Some work has integrated studies of stress and support with studies of stress and immune function (e.g., Woolfolk & Lehrer, 1995). This work suggests that the down regulation of the immune system is partially linked to physical and psychological stress. Strong social support can mitigate the harmful effects of stressful stimuli on cholesterol level, uric acid level, and immune function (Dorian, 1985; Thomas & Goodwin, 1985). *Such studies suggest that links between chronic exposure to stress, social support, and coping strategies can result in a specific immune response. The two systems most closely associated with maintaining homeostasis of the organism, the neuroendocrine system and the immune system, are more effective adaptive systems under the influence of social support. Stress exerts a negative influence on both these systems, while support mediates the effects of stress on the central nervous system and ultimately on the immune system.*

With respect to psychological health, many studies have indicated that a person's receipt of social support may help moderate the effects of stressful life events on his or her psychological state (see Abbey, Abramis, & Caplan, 1985; Goldberg, Van Natta, & Comstock, 1985; Hammer, 1983; Kessler & McLeod, 1984; Kessler, Price, & Wortman, 1985; Thoits, 1982; Turner, 1981; Turner & Marino, 1994; Vaux, 1985). For example, Brown et al. (1977) found that among two small samples of working-class London women, those who were more socially "integrated" (i.e., had more social support) tended to have lower rates of depression. *Much effort in the study of support and psychological health relationships has been devoted to examining the extent to which support affects health independently of stress, or the extent to which support*

"buffers" people from experiencing the full brunt of stress when it is encountered. Both processes appear to be operative (Lin et al., 1986). *Affective support (emotional aid, companionship) appears to be a better predictor than instrumental support (goods, services, money, information) of psychological well being and physical health* (Abbey et al., 1985; Israel, 1985; Kessler & McLeod, 1984).

The distinction between affective and instrumental support indicates that "support" is as vaguely metaphorical a concept as "disease." It is a global, unidimensional, sensitizing concept rather than a variable to be analyzed. Support needs to be deconstructed into its constituents, operationalized for measurement, and studied for its functionality. *In addition to analyzing the consequences of social support for health, investigators need to consider its etiology and understand what kinds of personal communities and community ties produce which kinds of social support*. When applied to the study of social support, the social network approach engenders a more fine-grained attention to how the composition of ties, the nature of relationships, and the structure of these relationships affect the quantity and quality of support available through the networks.

Fostering Social Support

The discovery that one could not just assume the existence of a broad spectrum of social support in all community ties encouraged investigations into the causes and correlates of social support as well as its consequences, thereby extending the analytic chain backward to discover social factors associated with the provision of support. Researchers acknowledge that "research on the relationship of social networks to health care use has been retarded by imprecise definitions of social network characteristics, nonspecific hypotheses concerning their relationships to utilization, [and] a confusion of social support and social networks" (Horwitz, Morgenstern, & Berkman, 1985, p. 947). *Work is now more likely to distinguish between supportive and unsupportive ties, and perceived and received support, and to recognize that different types of networks may provide different kinds and amounts of support*.

If one cannot assume the universal and undifferentiated existence of broadly supportive relationships, then it becomes important to understand the circumstances under which particular kinds of social support will be available to maintain health. *By contrast to the emphasis on the health-giving effects of social support, far fewer studies have looked at the social causes of social support. What social factors are associated with the production of social support in community ties and networks?* This is an important practical as well as intellectual question; people want to know which of their network members will help deal with their various needs. Most research into this question has concentrated on identifying the types of ties that provide different kinds of support. *Thus, our research group has found that people tend to receive different kinds of social support through different types of relationships. Parents and adult children are preeminent sources of emotional support and large services; available relationships (living or working nearby, or otherwise in frequent contact) provide many small services; friends and siblings are preferred sociable companions; and women provide much emotional support, especially to other women (Wellman &* Wortley, 1990). *The specialized nature of these supportive ties and the fragmented nature of the networks means that people must actively work to maintain each supportive relationship rather than relying on solidary communities to do their maintenance work.*

Initially, most studies of social support have treated community ties as discrete dyads, using exchange theory as an underlying perspective. While they often termed the aggregate of these dyadic ties a "social network," their loose, metaphoric formulation did not allow them to analyze the characteristics of these networks. The studies implicitly assumed that networks are homogeneous in their structure and composition and that variations in structure and composition are largely irrelevant to the provision of support. Such assumptions led to a focus on network size as the only important precursor variable, for if all relationships are the same, then the greater the body count, the more support available. Yet the essence of community ties is that they are parts of social systems: Each tie is structurally embedded in larger social networks, and the form of these networks can markedly affect the kinds of resources that flow through any specific tie.

The research reported in this article builds on existing work by considering for the first time how the characteristics of personal community networks affect the supportiveness of these networks. Social support has a social network as well as an interpersonal basis. Not only do people need--.and want--.to know which of their relationships are apt to provide different kinds of support, they also need and want to know the number and proportion who provide different kinds of support. Thus the flow of supportive resources through a network is inherently shaped by the characteristics of the networks themselves, as well as by the characteristics of the persons and ties of which these networks are composed.

In this chapter we investigate the extent to which four properties of personal community networks shape the kinds and amount of resources that flow through them: the networks' range, availability, kin dominance, and composition. We analyze how these structural and compositional properties of networks contribute to the provision of different types of social support, and we propose improved conceptualizations.

Studying Networks of Social Support

The Context

Our information comes from two linked data sources: a large survey conducted in 1968 and a small set of interviews conducted a decade later. This information was collected from one-time residents of the Toronto borough of East York. Densely settled East York, with a population of about 100,000, is an integral part of the transportation and communication networks of metropolitan Toronto (population = 3+ million). It is located about 6 miles (a half-hour subway ride or drive) east of Toronto's central business district. When the survey and interviews were conducted, its small private homes and apartments housed a settled, predominantly British-Canadian, working- to middle-class population (for details see Gillies & Wellman, 1968; Wellman, 1982). East York has a long tradition of communal aid and active social service agencies. Because medical services are paid for from the public purse, social support among East Yorkers (and Torontonians in general) is often intertwined with and complementary to formally mandated care.

The Large Survey

The large, 1968 in-person survey of a random sample of 845 adult (age 18+) East Yorkers used a structured interview. The respondents reported about their relationships with each of a maximum of six *intimates* (mean= 5), a total of 3,930 relationships. The virtues of this data set are its large sample size, systematic information about each intimate, information about each network's social density, and its fit with the subsequent interviews. Although the data were collected more than 25 years ago, the findings are consistent with more contemporary studies (for details see Wellman, 1979, 1988, 1993).

This was one of the first surveys to inquire about social support (Wellman, 1993), and at that time we did not appreciate the differentiated nature of social support. Hence, we asked only two broad questions about whether each intimate provides social support:

1. "Which of these [intimates] do you rely on for help in everyday matters?" The respondents reported that 22% of their intimates provide everyday support. However, 60% of the respondents reported that they have such everyday help available from at least one intimate.

2. "Which of these [intimates] do you rely on for help in an emergency?" The respondents reported that 30% of their intimates provide emergency support. However, 81% of the respondents reported that they have such emergency help available from at least one intimate.

Thus the usual respondent receives help from intimates, particularly in emergencies, but the providers of this support are a relatively small part of their social network. The overly broad questions about "everyday" and "emergency" social support limit our ability to understand the specialized kinds of support that different types of ties and networks provide, and it also probably led to underreporting of the support provided by intimates. Moreover, in asking only about the strongest ties in each focal person's network, the survey ignored the support that could be provided by weaker, but still active, relationships.

The In-Depth Interviews

To deal with these limitations, we conducted in-depth interviews in 1977–78 with 29 of the original survey respondents, sampled (at random? by area? by some other criteria? convenience?). We complemented the breadth of the original survey with depth in these interviews, gaining much more information about many more ties in each network. We held open-ended discussions with each respondent lasting for a total of about 15 hours, asking in detail about all persons with whom they were significantly "in touch." We elicited the kinds of support exchanged with each network member by asking respondents about 18 different kinds of help they had ever given to or received from network members.[22]

The networks of the 29 respondents contain a total of 343 "active" ties, with a mean of 5 "intimate" ties and 7 somewhat weaker "significant" ties per network. By revealing that a majority of ties (which include non-intimates as well as intimates) provide some kind of support, these detailed data correct the impression left by the large survey that only a minority of intimate ties are supportive. Eight specific types of support predominate in these networks, each present in at least one third of the ties and two thirds of the networks: minor emotional aid; advice about family problems, major emotional aid, minor services , lending household items ,minor household services, sharing ideas, and doing things together. *Thus, these active network members are most apt to provide intangibles--.emotional support and companionship--.along with minor goods and services*. Note, however, that *no specific type of support is given by a majority of* these *active network members*, and presumably the 1,500 or so weaker relationships in a person's network are even less apt to be supportive.

The other specific types of support are each present in less than one fifth of the ties: aid in dealing with organizations, major household services, regular help with housework, major services such as children's day care and long-term health care, small and large loans and gifts, financial aid for housing , and participating together in

[2] Because of length constraints, we provide only quantitative data here, but qualitative evidence is available in other papers based on these interviews (Wellman, 1982, 1992a; Wellman, Carrington, & Hall, 1988; Wellman & Tindall, 1993; Wellman & Wortley, 1989, 1990; Wellman, Wang, Tindall, & Nazer, 1997).

an organization. Thus, only a small minority of network members provide financial aid or major goods and services.

The 18 specific types of support cluster into six basic support dimensions, for multiple types of support tend to be provided in the same relationships (Wellman & Wortley, 1989). For example, relationships that provide minor emotional support also tend to provide major emotional support. *Three dimensions are provided by a majority of active network members in the sub-sample and are present to some extent in almost all their networks: emotional aid, minor services, and companionship. Three dimensions are much more rarely provided by network members but are available from at least one person in most networks: major services, financial aid, and job information.*

These dimensions are congruent with other studies of social support (see the reviews in Gottlieb & Selby, 1990; Wellman, 1992b). Moreover, the grouping of specific kinds of support into substantively different dimensions has its own interest. *By contrast to the broadly supportive relationships of the East Yorkers' spouses* (Beverly Wellman & Barry Wellman, 1992), in-depth interviews suggest that *the members of their personal community networks specialize in the dimensions of support they provide*. Although most of the subsample's active network members provide at least one dimension of support, only a minority provide at least three dimensions. It would appear that t*o obtain a wide range of support, people must actively shop within their networks for those who specialize in giving them a particular sort of help; they cannot count on most ties within their networks to give them the kinds of support they might need.*

Stresses and Strains in Networks

It is fallacious to equate "social networks" with "support networks" (for a differing view, see Pilisuk & Parks, 1986). *Not all ties in these networks are supportive*. The rudimentary data in the early survey reported that only 30% of intimates help in emergencies, and only 22 percent help in dealing with everyday matters (Wellman, 1979). Much more detailed questioning in the subsample

interviews about multiple kinds of support reports a broader base of assistance. Few of these intimates do not provide any kind of support. Even among the somewhat less strong, significant ties, only a fifth do not provide any kind of support. *In short, most, but not all ties, appear to be supportive, but the weaker the relationship, the less supportive (Wellman & Wortley, 1990).*

Moreover, only a small majority of ties studied in depth are trouble-free, whether involving intimates or signficants. (Similar data are not available from the survey.) *However, most problems are minor*, with few intimate or significant ties having major problems. A greater likelihood of significant ties with major problems (x2.6) points to the involuntariness of some relations with extended kin, neighbors, and workmates. At times, structures bind people to one another so that they feel they must remain actively involved with troublesome ties. For example, mothers who stay at home during the day to care for young children may have stressful relationships when they are obliged to rely on each other for help (Wellman, 1985).

Four types of problems occur in about equal amounts in these networks. About one quarter of the problematic relationships are somewhat involuntary ties with kin, coworkers, or neighbors (mostly kin). Another quarter of problematic relationships stem from differences in socioeconomic status, stage in the life cycle, and especially lifestyle. Interpersonal hurts and withdrawals account for yet another quarter, especially the failure to act when support is needed, and personality clashes comprise the remainder.

Measuring the Number and Percentage of Social Supporters

Our principal analytic task in this chapter is to ask what variations in personal community networks are associated with the availability through these networks of various amounts and kinds of social support. If availability is principally a function of network size and composition, then simple aggregation from relational analyses may suffice. If availability is also a function of a network's structure and heterogeneity, then the network basis of support is more than the sum of its constituent relationships.

To study network support, we again rely on our early survey for basic information

about a large sample and on the in-depth interviews for more extensive information about a smaller sample. The survey only asked about intimates, the interviews deal with both intimates and significant ties, which are quite active but not intimate. Thus, we can use information from both the large survey and the detailed interviews to study support from intimates and can also use the interviews to compare support from intimate and significant ties. For each dimension of support, our two key measures are the number of network members providing support and the percentage of network members providing support.

When people need support, they would like to know how many network members are supportive. The number measures tell how many members of each network provide everyday or emergency aid (from the survey) or companionship, emotional aid, services, or financial aid (from the interviews). For example, as there are three different kinds of emotional support, a 10-person network could provide a maximum of 30 strands of emotional support.

The percentage measures reflect how likely a person is to receive support from an average network member. The percentage variables automatically control for network size in a way that the number variables do not. For example, we can easily find that 50% of network members provide emotional support in networks of 5 and 10 members, even though there is twice the number of supporters in the 10-person network.

We present our analysis in subsections. The first subsection discusses the overall regression models. Each of the next four subsections discusses a particular network dimension: stating its rationale, operationalizing it, and discussing the kinds of social support that are associated with it**.**

The Relationship of Network Characteristics to Social Support

The 1978 interviews provide information about both intimate networks and significant networks (comprising active ties that are somewhat less intimate). For both

intimate and significant networks, there are positive associations with the number of providers of all four types of support. Despite the small sample, most regressions achieve statistical significance. For the *intimate networks*, the *numbers* of network members *providing companionship (.40), emotional aid (.39) and major services (.23*) *are significantly associated* (Table 1). For the *significant networks*, the *numbers* of *providing companionship (.34), emotional aid (.33), and minor services (.32) are also significantly associated (Table 2).*network members

There are more complex results in these data for the *percentage* of network members who provide support. None of the regressions is significant for either the intimate or significant networks (Tables 1 and 2). However, for the *intimate* networks, the percentage of network members providing support has weak positive associations with companionship (.13) and emotional aid (.11), although for *significant* networks, the adjusted R^2s hover around zero.

The 1968 survey data show the network dimensions studied to be significantly associated with both the *number and percentage* of all three types of support measured: visiting, everyday support, and emergency support (Table 3). Compared with the more finely measured interview data, the regression coefficients are low, although the large sample size of the survey does make it easier to achieve statistical significance. The strongest association is with the number of intimates who visit socially ($R^2 = .19$).

Range

Rationale. The range of a network refers to a mix of structural characteristics that collectively heighten its capacity to provide diverse resources and access to other social milieus (Burt, 1983; Haines & Hurlbert, 1992; Marsden, 1987). *A network with a high degree of range is one that is relatively large and is composed of heterogeneous network members*. Indeed, *our data show that large personal communities with a high proportion of significant ties usually are socially heterogeneous and sparsely knit networks* (Wellman & Potter, 1997**).**

The connection between network range and social support rests primarily on

standard sociological interpretations of network heterogeneity. Are networks with high range more cohesive and supportive than networks with low range? Arguments that range breeds support reflect the conjectures of Durkheim (1893) & Simmel (1922) that relationships that cut across social categories foster solidarity and satisfy mutual needs (see also Blau, 1993; Blau & Schwartz, 1984; Kemper, 1972). Thus Granovetter's "strength of weak ties" (1973, 1982) argument contends that weak ties provide better connections to different social milieus because they usually connect socially dissimilar people (see also Burt, 1987). Hence, *the greater the range within a network (greater size and heterogeneity, lower density), the more access to diverse sources of support and thus the greater availability of support.*

Network size enters into the equation with the standard expectation that as the number of network members increases, the relative heterogeneity of the network also increases (Haines & Hurlbert, 1992). Under this assumption, greater size provides access to a greater variety of potential sources of support. Accordingly, as the size of a network increases, so should the number of potential support givers. The relationship might be linear, so that as the number of network members increases, the number of persons providing support increases at the same rate while the percentage of network members providing support remains constant. *An even stronger relationship would be that as the number of network members increases, the number and percentages of network members providing support also increase.* This curvilinear relationship would fit with research showing that people with more social skills tend to have larger, more supportive networks (Parks & Eggert, 1991; Riggio & Zimmerman, 1991).

There is also a plausible contrasting argument that low network range fosters supportiveness. This argument is *based on the supposition that network members with similar social characteristics tend to flock together in similar structural positions and become supportive friends* (Lazarsfeld & Merton, 1954; Marsden, 1988). Thus, the similar characteristics and interests of network members may foster cohesive networks, empathetic understanding, and mutual support. This argument suggests that the greater the range (and hence diversity) within a network, the less support one would find.

Research into the circumstances in which bystanders intervene to help strangers (Latané & Darley, 1976) also suggests that networks with low range-- especially small networks-- would be more supportive. Its findings suggest that network members would be reluctant to get involved when they think that others can provide support. A weaker form of the argument suggests that more network members would lead to an increased number of supporters but that the rate of increase in support (i.e., the percentage of network members providing support) would decrease (van Tilburg, 1990).

Smaller, low-range networks might be supportive if quality compensates for quantity: Persons with smaller networks might have more time to attend to each network member and hence would be more apt to evoke reciprocal help from each of them. As the number of network members increases, the number of supporters stays the same, but the percentage of network members providing support decreases. An extreme expectation would be that as the number of network members increases, both the number *and* percentage of network members providing support decreases. Under each of these scenarios, it is low range that is associated with significant amounts of support from the network.

Operationalization. Network size, one of the indicators of range, is difficult to measure because networks have fuzzy boundaries. Social networks are dynamic entities since network members can easily come and go (Wellman, Wong, Tindall, & Nazer, 1997). As there is no such thing as "the network," analysts must specify inclusion criteria. The 1968 survey focused on intimate ties, a mean of 5. Since the 1978 data allowed us to control for tie strength, we were able to analyze network size in terms of the number of active ties per network, including the number of intimate and significant ties per network. In 1978, the mean network size was 12 active ties (5 intimate ties and 7 significant ties). The mean number of intimate ties per network in both 1968 and 1978 is identical, giving us confidence in the comparability of the two intimate data sets. Because intimate ties are more apt than significant ties to give multiple kinds of support, we analyze separately (in the interview data) relationships between the number of intimates and significants and the number and percentage of

network members providing each kind of support.

Measures of network heterogeneity (another indicator of range) and network size are often confounded because they are highly correlated: the larger the network, the less homogeneous it is. For both data sets, we used standard deviations to measure the homogeneity of network characteristics that were measured as continuous variables: age and socioeconomic status.[3] In the 1978 data set, we were able to use Schuessler's Index of Qualitative Variation (Mueller, Schuessler, & Costner, 1970) to measure the heterogeneity of network characteristics that were measured as nominal variables: ethnicity, role, sex, religion, employment status, and marital status. As preliminary work showed that almost all heterogeneity measures in the interview data formed one factor, we constructed a composite measurement, combining all of the indicators of network homogeneity: marital status, employment status, religious affiliation, ethnicity, age of network members, similarity of education of network member to respondent, and socioeconomic status. This standardized composite measure is based on a scale of 0 to 4: the higher the score, the more heterogeneous is the network.

As our research has shown that network size and heterogeneity form a single element of personal networks (Wellman & Potter, 1997), we constructed a single range variable. To simplify the analyses and provide a comparable measure between data sets, we standardized the variables for size and heterogeneity in each data set and combined them in a single range variable.

Findings. Our findings show the importance of high network range for the provision of social support. Large, heterogeneous networks have greater numbers of members who provide all kinds of support.[4] *The 1978 interviews* show that both intimate and significant networks with high range contain a large number of members

[3] We measured socioeconomic status using the Blishen and McRoberts (1976) scale for occupations, a Canadian adaptation of Duncan's (1961) U.S. scale.

[4] Separate analyses for network size and network heterogeneity yields results similar to those obtained for the combined network range measure. This is to be expected, given the high correlation (and common factor location) of the size and heterogeneity variables. We found no association between network similarity and social support, where similarity is the extent to which the focal person at the center of a network is similar to network members. Other research has found that such structural similarity is less salient for the provision of support than "experiential" similarity between people who have experienced similar life events and traumas (Suitor, Pillemer, & Bohanon, 1993).

who provide companionship, minor services, major services, and emotional support; their large regression coefficients are greater than any others in the models (Tables 1 and 2). *In the 1968 survey data,* the regression coefficient of range is quite strongly associated with number of network (intimate) members engaging in social visits and significantly (although somewhat less strongly) associated with the number providing everyday and emergency support (Table 3). However, high network range is not significantly associated with higher percentages of network members who are supportive, and there is no consistent pattern in the signs of the coefficients across the data sets.

These findings give some credence to the supposition that networks with high range have both a larger number and a greater variety of support givers. Range (size and heterogeneity) is just as important in intimate networks as it is in somewhat less strong significant networks. So it is not only the strength of weak ties that is important but also the number and diversity of all active ties.

Network Availability

Rationale. Analysts have argued that the more contact among network members, the more supportive the relationship. They contend that frequent contact fosters shared values, increases mutual awareness of needs and resources, mitigates feelings of loneliness, encourages reciprocal exchanges, and facilities the delivery of aid (Bumpass, 1990; Clark & Gordon, 1979; Connidis, 1989; Galaskiewicz, 1985; Homans, 1950, 1961). Frequent contact**,** or even just being physically available for contact, provides an important basis for the delivery of goods and services. Indeed, *our research group has found that available ties (having frequent face-to-face or telephone contact or just living or working nearby) are significantly more likely to provide small supportive services, such as child minding or lending household goods* (see also Marsden & Campbell, 1984). *Such findings suggest that the effects of availability operate independently of the strength of the relationship, so that in the networks we study there is much material support provided in all highly available networks, regardless of whether they are composed of strong, intimate ties or are more broadly composed of all active ties*. In short, the argument proposes that the greater the

availability of a network, the more apt that network is to provide social support.

Other scholars see an interaction among availability, the strength of relationships, and supportiveness. They argue that many routinely available ties (such as with coworkers or people living in the same neighborhood) are not likely to be supportive under any circumstances. *In contrast with the previous argument, this one suggests that it is the availability of strong (intimate) ties, and not of all ties, that fosters support* (Israel & Antonucci, 1987; Jones, 1982; Kessler & McLeod, 1984; Rook, 1984; Seeman & Berkman, 1988).

Operationalization. Our operationalization of network availability is a multistage process. To construct contact measures, we use in all data sets the logged (base 10) mean network frequency of face-to-face contact and telephone contact. We also use (logged) residential distance: The 1978 data sets show that network members live a median of 9 miles apart, although a significant minority (22%) live in the same neighborhood, and a handful live in Europe. As the 1968 data set does not have a measure of continuous residential distance, we calculate the percentage of network members who live in metropolitan Toronto (75%). We use this measure, rather than the percentage living in the same neighborhood, because previous research has shown that network members living outside the neighborhood but in metropolitan Toronto give about as much social support as those in the same neighborhood. We use logged statistics because an increase of 1 day or mile at higher values (e.g., from 364 to 365 days or miles) is less socially meaningful than an increase at lower values (e.g., from 1 to 2 days or miles).

Like the range variable examined earlier, our availability variable in all data sets is based on Wellman and Potter's (1997) delineation of the basic characteristics of personal communities, in this case showing that the frequency of face-to-face contact, telephone contact, and residential distance load highly on one factor. To maintain comparability between data sets, we do not use the factor loadings themselves. Instead, we combine into a composite measure of contact the standardized logged mean frequencies of telephone and face-to-face contact and the logged mean residential distance.

Findings. *Both the survey data and the in-depth interview data support the argument that it is the availability of strong intimate ties in particular that explains t*he *supportiveness of intimate networks*. The large 1968 survey sample shows that highly available networks have a significantly higher number and a higher percentage of network members who provide all kinds of support: social visits, everyday aid, and emergency aid (Table 3). Indeed, these are consistently the strongest regression coefficients for the percentage of supportive network members, and along with range, they are the only significant, positive coefficients for the number of network members. The pattern is similar for the intimate networks in the 1978 interview data set, although the coefficients are not significant in this smaller sample (Table 1).

The pattern is different for the less intimate significant networks, in which network availability is not positively associated with any kind of network supportiveness (Table 2). Indeed, there are negative coefficients between availability and the number (-.21) and percentage (-.10) of significant network members providing emotional support. In short, available networks are only more likely to support when the strength of their ties can provide aid that may consume substantial amounts of time or money. Unlike the tie-level analysis of these data, availability fosters all kinds of network supportiveness, not just the delivery of minor goods and services.

Densely Knit Kin *vs*. Sparsely Knit Friends

Rationale. The saying that "blood is thicker than water" expresses the common understanding that kin are expected to be more supportive than other network members. There are both structural and normative reasons for this expectation. The densely knit structure of most kinship ties intersects with the norm of encouraging supportive relations among kin. Such norms idealize the promotion of family welfare, encourage kin to share resources, urge them to give other kin privileged access to these resources, and cherish long-term reciprocity.

Networks with a high percentage of kin tend to be densely knit. Standard sociological interpretations suggest that densely knit networks have stronger norms and better communication, control, and protection (Bott, 1957; Durkheim, 1897;

Fischer, 1982; Kadushin, 1983; Marsden & Hurlbert, 1988). Therefore, *densely knit networks should lead to a higher number and percentage of network members providing support (Pescosolido & Georgianna, 1989; Thoits, 1982). This is especially likely to be true for the provision of material support, which often requires more coordination than the provision of intangible support such as emotional aid and companionship.* In practice, network density and the percentage of kin are so highly correlated that they must be analyzed jointly. Yet not all kin are equally supportive; our group has found that while immediate kin (parents, adult children, siblings) provide a wide range of support, other kin (aunts, cousins, grandparents) tend to provide less support than friends, neighbors or coworkers. This finding suggests that *the percentage (and density) of immediate kin-- and not of all kin--.in these networks may well be a key to supportiveness.*

An alternative hypothesis is also plausible, although less widely supported in the literature. Because there is more normative pressure to maintain kinship ties than friendship ties, they may be retained even if they are unsupportive, burdensome, and provide poor companionship (Stokowski & Lee, 1991). Indeed, women with a high percentage of kin in their networks can experience more stress in their lives (Haines & Hurlbert, 1992). Moreover, the high density of kinship relations can lead to "inbreeding" (Bienenstock, Bonacich, & Oliver, 1990; Burt, 1992;). Because information flows rapidly between densely knit kin, such networks may be less apt to acquire new information from the outside, be it about politics (Gans, 1962) or health care (Pescosolido, 1991; Salloway & Dillon, 1973; Beverly Wellman, 1995). *This contrasting argument suggests that sparsely knit networks with a low percentage of kin might have a high number and percentage of network members providing support because of the diversity of supportive resources available to such networks.*

***Operationalization*.--** Because of the strong association between high percentages of kin and network density in the data sets, we create a single measure of kin/density. First we standardize the percentage of immediate kin, the percentage of friends, and network density. Then we combine them into a composite measure for each data set. Density is calculated as the ratio of the number of links that actually

exist between network members to the number of links that are theoretically possible. Both the survey (33%) and the interviews (42%) show moderate density among network members; that is, a substantial minority of active network members are directly linked with each other as well as indirectly linked (by a two-step path) through their respective ties to the respondents.

Findings. Kin/density is not an important factor in the provision of support. In the less intimate ***significant*** *networks, it is not related to the provision of any kind of support (*Table 2). *In the* ***intimate*** *networks, the few significant associations are congruent with how kinship ties affect support. In the* ***interview data set****, intimate networks with high kin density are significantly less likely to have high companionship* (Table 1). This finding fits the tie-level data, including respondents' reports that they valued aid from parents and adult children but did not enjoy socializing with them. By contrast, **the survey data** fit the argument that intimate networks with high kin density have larger percentages of social visitors and providers of emergency support (Table 3). Although the greater percentage of social visits in dense kin networks is anomalous (and may be an artifact of a vague question), the profusion of emergency support in dense kin networks fits the tie-level finding that immediate kin are especially apt to help with major domestic needs and to care for serious illness and infirmity**.**

Network Composition: Socioeconomic Status and Women

Rationale. Social characteristics are positional statuses that network members "possess" rather than qualities of network relationships. When people with certain social characteristics are likely to possess such resources as wealth, empathy, or skill, they may be especially useful sources of social support. We concentrate here on socioeconomic status and gender. *Analysts have argued that because people with high socioeconomic status tend to have more material resources and information available, they tend to get more requests for instrumental support and companionship* (Campbell, Marsden, & Hurlbert, 1986; Degraaf, Lin, & Flap, 1988; Lin, Dayton, & Greenwald, 1983; Lin, Dean, & Ensel, 1986; Lin & Dumin, 1986). *Analysts have also shown that North American women are more likely than men to provide emotional support, possibly because "women express, men repress*" (Perlman & Fehr, 1987, p.

21). Indeed, women are often the principal emotional supporters of men as well as of other women (Sapadin, 1988; Wellman, 1992a, 1992b). *In addition, women provide many small services that are often taken for granted within the rubric of household chores* (Fox, 1980; Gullestad, 1984; Hammer, Gutwirth, & Phillips, 1982; Luxton, 1980; Stack, 1974).

Operationalization. The only decent indicator we have of socioeconomic status is the occupational status of the network members. We use the Blishen and McRoberts scale to measure a network's *mean* occupational status (1976; mean = 55). For gender, we measure the percentage of women per network. Women are a majority in each data set.

Findings. *Just as these data have shown no consistent tie-level relationships between socioeconomic status (SES) and social support, there are few significant associations between a network's socioeconomic level and its provision of* ***different types*** *of support. Those significant associations that do exist for intimate networks are contradictory. Consistent with other research, high-SES intimate networks in the survey data set have more members who provide emergency support* (.10; Table 3). However, the argument is not supported in the interview data set where high-SES intimate networks have fewer members who provide major services (-.40; Table 1).

The gender composition of networks is not straightforwardly linked to provision of support, as the survey and the interview data sets show discrepant findings. *The* ***survey*** *data set shows that the percentage of women in networks is negatively associated with the number and percentage of the intimates in these networks who provide emergency and everyday support* (Table 3). However, the negative association does not clearly refute the argument that women provide more emotional support, because the survey asked only general questions about everyday and emergency support.

By contrast, the ***interview*** *data show a positive association between the percentage of women in a network and the number of network members providing emotional support* (Tables 1 and 2). This finding is consistent with tie-level analyses

of these data, which have shown women playing more active roles in the provision of emotional support. The discrepancy between the survey and interview data sets leads us to question whether the role of men and women reversed between 1968 and 1978 or whether the anomaly is an artifact of the different questions that were asked. We are more comfortable with the more precise and more recent findings of the interview data, which are consistent with our group's analyses of which types of relationships provide which kinds of support (reviewed in Wellman, 1994).

Summary and Conclusions

We have asked a basic question: What types of ties and networks provide what kinds of supportive resources to the persons at the centers of these personal communities? This question connects us with key social scientific concerns about the following:

1. The complex structure and composition of personal community networks;

2. The multidimensional nature of social support;

3. The interplay between the structure of social networks and the personal characteristics of network members in affecting the flow of resources through their networks;

4. The long-standing core sociological question of whether a social system is more than the sum of its constituent relationships.

Our research suggests that social support is widespread and specialized in these networks. Most--but not all--active ties provide some kind of support. Such support is focused largely around domestic concerns, such as operating a household, interpersonal relationships within the household, and coping with illness. By contrast to the developing world, few of these Canadians' ties and networks are devoted to economic survival or dealing with political or bureaucratic matters.

These social networks are not only support networks. An appreciable minority of relationships involve stressful problems, and many of the problems appear to be social. Such problems are related to the stressful nature of ties that are somewhat involuntary (such as kinship and working together), to differences in social status (lifestyle, life cycle, and socioeconomic status), and to interpersonal hurts, withdrawals, and failures to act. Only about one quarter of problematic relationships are related to purely psychological phenomena (such as personality clashes), and we suspect that some of these reported clashes may be sociologically engendered without the respondents realizing it.

Social support is neither randomly nor evenly distributed in these networks. Our research suggests that a number of network phenomena foster interpersonal supportiveness:

1. The range of a network--. its size and heterogeneity--. is generally the characteristic most closely associated with its supportiveness. The more network members, and the more diverse their characteristics, the greater the number and percentage of support providers. Moreover, large networks are more apt to provide a wide range of support. Members of large networks clearly are not bystanders.

2. The availability of a network substantially fosters the provision of support. To an appreciable extent, the delivery of support depends on network members being in contact to learn of such needs and being physically accessible to provide assistance.

3. Densely knit networks with high percentages of immediate kin tend to provide more emotional and material support, although the effects tend to be weaker than for range or availability. The dense interconnections of such networks facilitate communication about needs, normative mobilization to deal with problems, and coordination for effective delivery of support. However, such networks provide less companionship than others.

4. The composition of networks affects the provision of support, but to a lesser extent than the aforementioned network structural properties. There is no consistent relationship between a network's socioeconomic level and its supportiveness, but somewhat ambiguous evidence suggests that networks with a high percentage of women are more emotionally supportive.

Thus, the supportiveness of networks is related to the aggregated characteristics of network members and relationships and to the emergent structural properties of networks. With respect to personal characteristics, women are more emotionally supportive than men. With respect to relationships, intimate ties (both kin and friends) and immediate kin (whether intimate or not) are especially supportive, although kinship usually does not extend to companionship. Tie-level dynamics are also apparent in the association of network availability and percentage of women with the number of support providers but not with the percentage of support providers. With respect to network properties, networks with high range (large size, high heterogeneity), more availability (live or work nearby, meet or phone frequently), and more density provide substantially more of certain types of support. Such structural effects cannot be inferred from the aggregated characteristics of ties.

To our knowledge, this chapter is the first attempt to go beyond the dyadic, interpersonal level to study the supportiveness of the social networks in which these ties are embedded. Analyzing how each network characteristic is related to social support is in a sense testing theories about what aspects of social structure are apt to convey different kinds of resources. Our work therefore also addresses a key sociological question: Do structural properties of a social system affect processes over and above the aggregated sum of what happens in its two-person relationships? When it comes to providing social support, a social network is more than the sum of its ties.

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Table 1. 1978 Data: Multiple Regression Statistics of Variables Predicting the Number and Percentage of Intimate Ties Providing Support

Network Dimensions	Dimensions of support							
	Companionship		Minor services		Major services		Emotional aid	
	No.	%	No.	%	No.	%	No.	%
Range	**.58**	(-.23)	**.58**	(-.08)	**.46**	(.18)	**.66**	(.20)
Availability	(.27)	(.28)	(.15)	(.18)	(.20)	(.22)	(.22)	(.38)
Immediate kin	**-.32**	(-.28)	(-.02)	(.09)	(.12)	(.04)	(-.01)	(-.07)
Socioeconomic status	(.21)	(.08)	(-.15)	(-.20)	**-.40**	(-.40)	(-.05)	(-.06)
Proportion women	(-.16)	(-.30)	(.07)	(-.22)	(.06)	(-.11)	**.32**	**.38**
Adjusted ^{2}	**.40**	(.13)	(.20)	(-.06)	**.23**	(.003)	**.39**	(.11)

Note: Standardized regression coefficients and adjusted R^2 in bold are significant at $p \leq .05$. Numbers in brackets indicate regression coefficients that are significant at $p \leq .10$.

Table 2. 1978 Data: Multiple Regression Statistics of Variables Predicting the Number and Percentage of Significant Ties Providing Support

Dimensions of support								
Network Dimensions	**Companionship**		**Minor services**		**Major services**		**Emotional aid**	
	No.	**%**	**No.**	**%**	**No.**	**%**	**No.**	**%**
Range	**.60**	(.24)	**.69**	(.36)	(.44)	(.004)	**.56**	(.11)
Availability	(.04)	(.03)	(-.08)	(-.03)	(.10)	(.15)	(-.21)	(-.10)
Immediate kin	(-.08)	(.002)	(.12)	(.11)	(.08)	(.20)	(.10)	(.07)
Socioeconomic status	(.10)	(.31)	(-.06)	(-.009)	(-.19)	(-.18)	(.10)	(.12)
Proportion women	(-.02)	(-.12)	(.07)	(.15)	(.12)	(.34)	(.16)	(.33)
Adjusted ^{2}	**.34**	(.05)	**.32**	(-.03)	(.004)	(.02)	**.33**	(-.01)

Note: Standardized regression coefficients and adjusted R^2 in bold are significant at $p \leq .05$. Numbers in brackets indicate regression coefficients that are significant at $p \leq .10$.

Table 3. 1968 Data: Multiple Regression Statistics of Variables Predicting the Number and Percentage of Intimate Ties Providing Support

Dimensions of support						
Network Dimensions	**Visitation**		**Everyday support**		**Emergency support**	
	No.	**%**	**No.**	**%**	**No.**	**%**
Range	**.42**	(-.03)	**.16**	**-.08**	**.17**	**-.19**
Availability	**.14**	**.21**	**.18**	**.22**	**.13**	**.16**
Immediate kin	(.01)	**.08**	(.02)	(.05)	(.03)	**.08**
Socioeconomic status	(.06)	(.04)	(.06)	(.05)	**.10**	(.06)
Proportion women	(.03)	(.01)	**-.09**	**-.11**	**-.12**	**-.12**
Adjusted ^{2}	**.19**	**.05**	**.06**	**.07**	**.07**	**.09**

Note: Standardized regression coefficients and adjusted R^2 in bold are significant at $p \leq .05$. Numbers in brackets indicate regression coefficients that are significant at $p \leq .10$.

Chapter 14.

Neighborhood and Adolescent Mental Health:\ Structure and Experience*

Carol S. Aneshensel and Clea A. Sucoff
University of California, Los Angeles

"... a city is not an arrangement of roads, buildings, and spaces,
it is society in action."
L. March, 1981, p. 202

An individual's mental health is influenced strongly by the actions of people who inhabit his or her social world. Nowhere is this truth more apparent than with regard to the mental health of children and adolescents. For example, the vast literature linking parenting behavior to child development and emotional well being attests to the power of social interactions, especially those entailing primary relationships. This theme is echoed in the literature on peer relations during adolescence. In general, developmental psychopathology has emphasized proximal social relationships, such as family and friends. Other adolescent outcomes, including early childbearing, educational attainment, and involvement in crime, have been linked to the structural characteristics of neighborhoods (for a review, see Jencks & Mayer, 1990), suggesting that the mental health of young people may also be affected by more distal social contexts. This chapter explores the impact of neighborhood on young people's mental health.

The discussion is organized into three sections. The first describes concepts of neighborhood, reviewing theories and research that link neighborhood to adolescent outcomes

such as early childbearing, juvenile delinquency, and educational attainment. The second applies these perspectives to stress and mental health, especially as these dynamics operate among young people. Specifically, it examines how the structure of neighborhoods shapes everyday life, influencing exposure to stress and access to resources and, hence, affecting risk of disorder. The third section discusses the implications of a neighborhood orientation for preventive intervention strategies.

Theoretical Perspectives on Neighborhood

The Concept of Neighborhood

Neighborhoods are collections of people living near one another within a particular geographical area. Conceptualizations of neighborhood typically emphasize three dimensions: spatial, structural, and social.

- Spatial dimensions are the physical boundaries of the neighborhood. These boundaries are usually defined in research applications as census tracts or zip code areas, although these formal lines of demarcation only approximate the informal boundaries that actually separate communities. In simplistic terms, the area within these boundaries is the "container" for social interaction among residents. Although adolescents operate in many overlapping social milieus, including family, school, and peer group, only their neighborhood has clearly defined spatial dimensions.

- The structural attributes of a neighborhood are the composite socioeconomic and demographic characteristics of the individuals who reside in that geographical area in the sense that a whole comprises its component parts. The neighborhood profile, then, accents traits generally shared by members of the collectivity, even though not all residents possess these traits. For

example, if most neighborhood residents are poor and Latino, the aggregate neighborhood is poor and Latino even though it also contains persons of other racial/ethnic backgrounds and those with more adequate financial resources. Most studies focus on socioeconomic status and, to a lesser extent, racial segregation as the key structural characteristics of neighborhoods.[1]

The modal neighborhood influences the nature of community life over and above the contributions from each resident's own attributes, and modal attributes may interact with individual attributes. For example, the experience of a Latino living in a predominantly Latino neighborhood is likely to differ both from that of a Latino living in a predominantly African-American neighborhood and from that of an African American living in a predominantly Latino neighborhood. Thus, as is often the case, the whole in this instance is more than the sum of its parts inasmuch as a neighborhood exists only as an aggregation. Indeed, the position of the individual relative to the local norm may be a key contributor to the social psychological impact of neighborhood. For example, in the relative deprivation model, low social standing is seen as being especially onerous when one lives surrounded by more well-to-do neighbors.

- The third dimension of neighborhood, the social functions it performs, refers to the provision of informal support networks, security, identity, and a normative context in which children and adolescents are socialized (Brewster, 1994; DuBois & Hirsch, 1990; Logan & Molotch, 1987). For example, the reputation of one's neighborhood confers a sense of identity or social standing, particularly for adolescents (Anderson, 1990). These social functions are the mechanisms through which the structural attributes of a spatial area influence the life chances of its residents. For example, children who grow up in ghetto neighborhoods-- where the predominant sources of income are public assistance, illegal activities such as

selling drugs, and minimum-wage jobs-- may learn to participate in the first two activities, which, from their vantage point, are the only viable options. Their latent socialization differs from that of children who grow up with neighbors who hold high-paying professional jobs. The latter learn the language and social skills required to participate in the labor force and witness directly the rewards of higher education in the lifestyles of their neighbors.

The Impact of Neighborhood

Distinct research traditions have explored the connection between neighborhood and individual outcomes.

- The *structural orientation* concerns the production and maintenance of systems of stratification within a geographical setting, particularly the creation of underclass communities (Massey & Denton, 1993; Wilson, 1987). This perspective compares rates of individual outcomes (e.g., school attrition) across neighborhoods of varying socioeconomic status (SES) and racial or ethnic compositions. *It is concerned, then, with the overall or modal impact of neighborhood as distinct from variation in individual responses to a particular setting*. The latter is attributed to variable exposure to these conditions and to independent family or individual risk factors (Crane,1991).

- In contrast, the *ecological orientation concerns the mechanisms linking neighborhood to individual outcomes*, in particular why some youth in high-risk settings demonstrate negative outcomes while others attain

successful outcomes (Jessor, 1992, 1993). Jessor identifies *factors that potentially mediate the structural influences of neigh*borhood, which he groups into *risk factors* (e.g., neighborhood poverty, racial segregation, and physical decay) *and protective factors* (e.g., community institutions and positive role models*). These mediators include the adolescent's subjective perception of his or her neighborhood, the family environment, and individual attitudes and personality*. Although a large literature relates these factors to adolescent outcomes, their relationship to the structural dimensions of neighborhood has yet to be elaborated in any detail.

Jencks and Mayer (1990) have integrated the structural and ecological perspectives and developed a taxonomy of ways neighborhood might influence behavior, as illustrated in Figure 1. The dashed line between neighborhood structure and individual behavior signifies that this association is mediated by the ecological context. The mechanisms that link the ecological context to individual behavior include (a) *social contagion models* in which problem behaviors are spread through peer pressure and, after passing some unknown threshold of susceptibility, become epidemic; (b) *collective socialization models*, which posit that adult role models create social norms that youth internalize and act upon; (c) *institutional models*, focusing on how established community organizations such as schools, police, or churches create and enforce social norms; and (d) *relative deprivation models*, which assert that individuals evaluate their situation relative to their neighbors.

- The first three models share a common orientation, which Jencks and Mayer (1990) refer to as the "disadvantages of disadvantaged neighbors." Specifically, adolescents are more likely to participate in socially undesirable activities in poor neighborhoods because these behaviors are prevalent and social control is lax. These models posit a main (albeit

indirect) effect of neighborhood on the outcome of interest.

- The fourth model, relative deprivation, emphasizes the "disadvantages of advantaged neighbors" (Jencks & Mayer 1990). Specifically, affluent neighborhoods benefit their affluent residents while simultaneously creating difficult conditions for their disadvantaged residents. For example, disadvantaged youth who live in relatively affluent neighborhoods may withdraw from society (e.g., drop out of school) or act against prevailing social norms (e.g., become juvenile delinquents) because they feel they cannot compete successfully with their advantaged peers. The relative deprivation model, then, does not assume that neighborhoods affect all residents uniformly, but instead predicts interactive effects.

As noted by Jencks and Mayer (1990), these mechanisms-- social contagion, collective socialization, social control, and relative deprivation-- may operate simultaneously, confounding empirical attempts to measure neighborhood effects. In addition, factors such as relative deprivation may counterbalance the beneficial effects of advantaged neighborhoods so that neighborhood structure appears unrelated to outcome. (This possibility is illustrated in Figure 1 by the +/- symbol.) Moreover, neighborhoods may operate differently across varying contexts, populations, and behavioral outcomes (Tienda, 1991).

Empirical Evidence for Neighborhood Effects

Previous research finds evidence of neighborhood effects beyond family influences and individual characteristics for some adolescent outcomes.

- *The strength and nature of neighborhood effects appear to differ, however, depending on the behavioral outcome and population studied.* Neighborhood effects appear to be quite strong for some adolescent

outcomes (e.g., childbearing), weak for others (e.g., crime), and countervailing for still others, so that they appear to cancel out one another (e.g., education). Moreover, the influences of a particular neighborhood context may differ according to the individual characteristics of the adolescent. Certain adolescents may benefit from a given neighborhood environment through one process (e.g., collective socialization), while others suffer negative consequences of living in the same neighborhood (e.g., relative deprivation).

○ In addition, *at least some neighborhood effects appear to be nonlinear*. For example, Crane (1991) found that neighborhood SES effects were linear except in the worst neighborhoods, where there was a dramatic increase in the probability of having a premarital birth and dropping out of school. Similarly, Hogan and Kitagawa (1985) classified neighborhood quality on the basis of social, economic, and demographic characteristics. They found that African American teens from low-quality neighborhoods had pregnancy rates that were one-third higher than the rates in either medium- or high- quality neighborhoods. Nonlinear effects are also suggested by studies showing extreme rates of problematic behavior, including juvenile delinquency (Peeples & Loeber, 1994) and childhood aggression (Attar, Guerra, and Tolan, 1994), in the most disadvantaged neighborhoods.

○ *There is some evidence that structural neighborhood characteristics not only affect childhood outcomes over and above family characteristics, but that neighborhoods also affect child well being indirectly by influencing parent-child interactions*. For example, Klebanov, Brooks-Gunn, and Duncan (1994) report that neighborhood poverty is associated with less

maternal warmth (e.g., physical contact) toward 3-year- olds and with a physical home environment that is not conducive to child development (e.g., dark interior of home and unsafe outside play area). Sampson and Laub (1994) suggest that neighborhood poverty reduces the capacity of families to supervise older children by detrimentally affecting parental discipline and parent-child attachment. Parents may respond to the social isolation and physical dangers of living in underclass communities by choosing more punitive and coercive parenting styles (McLoyd, 1990; Sampson & Laub, 1994; or by withdrawing from their children emotionally (Klebanov et al., 1994).

In sum, growing up in an underclass neighborhood characterized by high rates of poverty and violence is associated with a disproportionate increase in a variety of negative adolescent outcomes, including dropping out of school, early childbearing, and juvenile delinquency. These findings are consistent with the links between extreme neighborhood poverty, social isolation, and deleterious outcomes posited by Massey and Denton (1993) and Wilson (1987).

Neighborhoods, Poverty, and the Social Milieu

Although it is by no means the only connection between neighborhood structure and experience, the linkage we wish to emphasize is between the aggregate concentration of poverty within neighborhoods and the individual impact of living with social decay and detachment.

- Massey and Denton (1993) have described the connection between poverty and social decay, in their analysis of the causes and consequences of racial and economic segregation. *They contend that the concentration of poverty within urban ghettos leads to a mutually reinforcing relationship between social decay and social withdrawal*. The decline of neighborhoods

often is signaled by the emergence of public signs, such as public intoxication and graffiti, that violate previous community standards about what constitutes appropriate behavior in a "good" neighborhood. When residents perceive such a decline, they tend to retreat socially and psychologically from their communities; they stay away from certain sites, avoid strangers, remain indoors, and generally keep to themselves.

- According to Massey and Denton (1993), *the withdrawal of residents from active community life loosens surveillance and control over behavior, permitting a growth in increasingly serious social problems and criminal acts.* This intensification then leads to greater social withdrawal, a further loosening of social controls, and an accelerating spiral of community instability and decline.

- Massey and Denton assert that *these processes are intensified in hyper-segregated communities, leading to a shift* to the *in the normative environment and to the development of an oppositional culture* that inverts the values and ideals of middle- class American society.

Thus, the by-products of poverty and racial inequality, conditions such as crime, drugs, violence, illiteracy, and hopelessness, become isolated and concentrated within urban ghettos.

The Significance of Neighborhood for Mental Health

We turn now from the general impact of neighborhood to the specific ways neighborhood is likely to influence adolescent mental health. As mentioned previously, empirical research on neighborhood and mental health is extremely limited. Research into the impact of neighborhood on juvenile delinquency and aggression, however, is informative inasmuch as these outcomes converge with behavioral disorders like conduct disorder and substance abuse (Kupersmidt, Griesler, De Rosier, Patterson, & Davis, 1995; Peeples & Loeber, 1994; Sampson & Laub, 1994). We are aided as well by existing research into the social etiology of mental and emotional disorders, especially research concerning social stress and symptoms of depression and anxiety.

Theoretical Framework

Characteristics of neighborhood are consequential to mental health because these characteristics reflect the pool of social actors encountered daily. A person's social world is not restricted to neighborhood, of course, but many of the social interactions of children and adolescents occur within its boundaries. Neighborhoods are especially consequential for teens who lack ready access to other settings, such as those living in an underclass ghetto who may rarely, if ever, leave its borders (Massey & Denton, 1993).

Pathways

We envision three broad connections between neighborhood context and adolescent mental health (Figure 2).

- First, a dashed line represents structural characteristics, because we expect *a substantial portion of the gross association between structure and adolescent mental health to be mediated by the experiential neighborhood*

and by stress processes. Co-variation remaining after these intervening factors are taken into consideration represents, in essence, unspecified pathways through which structure influences mental health. In other words, we see structure as affecting mental health because it systematizes the experience of ordinary life in ways that enhance or diminish one's chances of attaining and maintaining mental and emotional well being.

- The second *pathway links structure to the experience of daily life within the neighborhood*; this, in turn, is seen as directly affecting the mental health of its young residents.

- In the third linkage, *both the structural and the experiential dimensions of neighborhood affect adolescent mental health by regulating exposure to stressors and access to resources.*

Nonspecific Outcomes

The disorders listed in Figure 2 include both internalizing and externalizing disorders, as well as posttraumatic stress disorder. This enumeration, albeit not inclusive of all possible mental health outcomes, suggests that these outcomes need to be broadly conceived. The impact of neighborhood on mental health is conceptualized as nonspecific (i.e., affecting multiple domains of functioning), rather than being manifest as a single disorder (e.g., substance abuse). (Figure 2 is discussed in greater detail below.)

Analytic Considerations

Models of neighborhood and mental health are inherently inter-group because differences in rates of disorder across neighborhoods can be explained only by corresponding differences in the attributes of those neighborhoods, and these attributes pertain to the collectivity, not to the individuals comprising them. This observation does not mean that individual-level factors such as personal history, temperament, and the attribution of meaning are unimportant, merely that these qualities are more useful to understanding individual differences than group differences. The latter requires a consideration of the ways groups are distinct from one another that are consequential to mental health. The groups with which we are concerned are the clustering of residential areas.

However, *neighborhoods usually are internally heterogeneous on the same characteristics that differentiate one neighborhood from another*. For example, neighborhoods may be differentiated economically in terms of average income, housing cost, net worth of residents, and so forth, but affluent neighborhoods typically contain those of modest means as well, and the poorest neighborhoods contain some residents who are reasonably well off. Although affluent and poor neighborhoods differ in their distributions of wealth, each also contains those who are wealthy and those who are poor, in relative if not absolute terms. Furthermore, the standing of the individual relative to the group norm is a key element in theories seeking to account for the impact of neighborhood structure (e.g., theories of relative deprivation; Jencks & Mayer 1990).

The impact of neighborhood on mental health, therefore, should be sought along two pathways.

- One is formed by the modal neighborhood: Dominant attributes of the community tend to exert a fairly uniform influence on most of its members. *This type of connection is one of central te*ndency: What is most typical of a setting produces a general propensity such that harsh neighborhoods tend to jeopardize mental health, while benevolent communities are conducive to well-being, even when hardship does arise. From this perspective, variation in mental health within neighborhoods would result from differential exposure to neighborhood characteristics, both good and bad.

- The second pathway emerges at the intersection of neighborhood norms and individual attributes. *This type of connection is inherently interactive*: The impact of neighborhood varies across individuals. The interactive effect is especially useful in understanding variability in mental health within neighborhoods (i.e., the reasons harsh neighborhoods are not uniformly destructive and benevolent neighborhoods prove detrimental to some residents). We have already commented on the contribution of individual attributes to the risk of mental disorder; here, we call attention to the interaction of these attributes with characteristics of the neighborhood. *The individual attributes with which we are especially concerned are those that signify one's position in stratified social systems, as distinct from idiosyncratic traits like personal history*. *Our focus is on attributes such as family SES, race/ethnicity, and gender*. These attributes help establish the social standing of the individual relative to the surrounding community and, thus, are useful for uncovering social regularities in the influence of neighborhood.

- *Interactive effects may also identify the conditions under which neighborhood matters to mental health*. Specifically, *neighborhood may modify the effects of other risk factors, amplifying or dampening their harmful effects*. For example, a recent study suggests that children living in conditions of extreme neighborhood disadvantage are most adversely affected by stressful life events (Attar et al., 1994). Similarly, vulnerable youth with few personal assets benefit most from living in communities in which there is a low level of problem behavior (Blythe & Leffert 1995).

These two pathways are specific instances of the general models discussed by Jencks and Mayer (1990). *The modal neighborhood is akin to the "advantages of advantaged neighbors" class of explanation, while interactive effects are similar to "disadvantages of advantaged neighbors" orientations*. For instance, rates of disorder may be elevated in poverty-stricken areas because young people are disproportionately presented with role models who engage in antisocial or self-destructive behavior; collective socialization patterns do not develop optimal coping strategies; or there are too few institutional resources available for those who need assistance in dealing with the numerous problems that arise when economic resources are constricted. On the other hand, some youth in affluent neighborhoods may be especially at risk because their comparison of self to others creates a sense of relative deprivation; because they differ from the majority or from conventional standards, feel out of place, and participate in deviant subcultures; or because competition is especially intense, success uncertain, and self-worth tenuous. Kupersmidt et al. (1995) employ a similar framework, distinguishing a main effects model in which neighborhood acts as a risk factor from three interactive models--protective, potentiator, and person-environment fit-- affecting only select subgroups of children. Their analysis of childhood aggression supports the interactive perspectives.

Similarly, it is possible that some youth benefit psychologically from living in generally destructive neighborhoods. Clark (1965) maintains that urban ghettos have protective features inasmuch as the physical separation from affluence shields residents from the pernicious effects of negative self-evaluations. This viewpoint has been criticized by Massey and Denton (1993), who contend that if urban ghettos are protective, it is in a debilitating manner; these coping strategies tend to maintain the very conditions that are damaging in the first place. This debate concerns the modal impact of neighborhood (i.e., the generalized tendency to benefit or harm the average person living in that environment).

An alternative possibility is that generally harmful neighborhoods are nonetheless beneficial for select residents (i.e., the effect of neighborhood is contingent upon individual characteristics). For example, some youth in poor neighborhoods may fare well psychologically because their comparison of self to others creates a sense of relative privilege: Although poor, they are above the community norm; disadvantaged, they have, nonetheless, achieved success through superior talent; or through effort and will they have beaten the odds stacked against them. This possibility does not entail the assumption that there are hidden benefits to being impoverished, as suggested by Clark (1965). Instead, the interactive possibility is predicated on the assumption that these environments are beneficial to some residents even though they tend to be generally detrimental.

In summary, two types of neighborhood effects on mental health warrant investigation. One concerns the generalized impact of neighborhood on its typical inhabitant. The second concerns the differential impact of neighborhood contingent upon attributes of the individual. One implication of these orientations merits emphasis. The positive and negative effects of neighborhood on mental health may counterbalance one another. If this were the case, neighborhood would empirically appear to be unrelated to mental health. Jencks and Mayer (1990) demonstrate that this type of suppressor effect is plausible by showing offsetting epidemic and relative deprivation effects for educational attainment. Thus, *it is imperative that*

the mechanisms through which neighborhood affects mental health be specified so that the positive and negative effects, if any, of the same neighborhood can be separated.

We turn now to a more detailed discussion of the three connections between neighborhood context and adolescent mental health presented in Figure 2.

Connection 1: The Structure of Neighborhoods and Mental Health

Neighborhood differences in SES & race/ethnicity.-- The impact of neighborhood structure is demonstrated by our recent work on the mental health of adolescents (Aneshensel & Sucoff, submitted). We have been able to explore this connection because a census-based sampling frame was employed to link information about the composition of census tracts to individual level survey data.[2] 1990 Census data operationally defined neighborhood characteristics for two aspects of social stratification: SES, specifically median household income, percentage of population below the poverty line, and percentage of the labor force in professional, executive, or management level occupations; and racial/ethnic composition, specifically, percentage African American and percentage Hispanic.[3] *A cluster analysis reveals that these neighborhoods are stratified by SES, representing the full spectrum from underclass to affluent, and are segregated by race/ethnicity; the poorest neighborhoods tend to be exclusively high-density minority, whereas the most affluent tend to be high-density non-Hispanic white.*

Neighborhood differences in disorders.-- Thus far in our analysis of these data, we have examined two internalizing disorders, depression and anxiety, and two externalizing disorders, conduct and oppositional defiant.[4] *There are statistically significant zero-order differences across neighborhood clusters for the two externalizing disorders*, but the two internalizing disorders do not differ across clusters.

- Neighborhood differences in the average number of behaviors indicative of oppositional defiant disorder ($p \leq .001$) and conduct disorder ($p \leq .05$) are

represented in Figure 3. *The most striking feature is the difference in the distributions of the two disorders*. *Symptoms of conduct disorder are most evident in strictly underclass neighborhoods, but symptoms of oppositional defiant disorder are most evident in middle-class and more affluent neighborhoods*.

- In addition, *two of the three clusters of working-class neighborhoods manifest low levels of both sets of problematic behavior; high densities of African Americans characterize both of these clusters.*
- *The third type of working-class neighborhood, which has a low density of African Americans, is toward the high end of the distributions for both sets of troublesome behaviors.*

We had anticipated that both externalizing disorders would be most prevalent in underclass neighborhoods, given the connections between poverty, segregation, and the development of an oppositional culture described by Massey and Denton (1993). The two disorders are positively correlated ($r = .44$; $p \leq .001$), with oppositional defiant disorder entailing less serious violations of conventional standards of behavior than conduct disorder. Although the behaviors characteristic of oppositional defiant disorder might be interpreted as "normal" adolescent acting out, this possibility does not account for the dense concentration of these behaviors in middle-class neighborhoods.

We see this pattern as underscoring the need to specify the ways neighborhood is consequential to mental health. *This finding demonstrates that the idea that a neighborhood is uniformly beneficial or detrimental is overly simplistic, because it points to some potential risks of living in middle- class areas. Similarly, the lack of zero-order association between neighborhood stratification and the internalizing disorders should not be interpreted as indicating that neighborhood is irrelevant to depression and anxiety. Such a conclusion would*

be premature until the possibility of suppressor effects, mentioned previously, is explored.

Neighborhood differences in residential stability.--We also explored a second aspect of neighborhood structure, residential stability --operationally defined as the percentage of households in the census tract occupied by the same residents for at least 5 years.

- *Adolescents living in neighborhoods characterized by a high density of long-term residents tend to exhibit relatively few symptoms of depression ($r = -.08$; $p \leq .05$) or anxiety ($r = -.09$; $p \leq .01$), yet residential stability is not correlated with behaviors indicative of the externalizing disorders*.

Thus, *residential stability does vary across neighborhood clusters; but its association with adolescent mental health appears to be separate from that of stratification*, given that the stratification clusters are not associated with the internalizing disorders.

The zero-order associations described here illustrate some general principles, although these correlations by no means establish causal connections.

1. The impact of neighborhood structure does not appear to be uniformly harmful or beneficial. Instead, neighborhoods that are conducive to the development of some disorders appear to be innocuous with regard to other outcomes. (Kupersmidt et al., 1995).

2. Although SES is generally inversely associated with disorder, advantaged neighborhoods may nevertheless pose special risks for select disorders.

3. Multiple dimensions of neighborhood structure are relevant to mental health. For example, aspects of stratification may be most important with regard to externalizing disorders, while aspects of social stability may be most important to internalizing disorders.

4. Finally, these overall associations, of admittedly modest magnitude, tap only the modal effects of neighborhood structure, not the differential impact of neighborhood across subgroups of the community.

The potential for offsetting costs and benefits means that it is necessary to specify the mechanisms through which structure matters to mental health as well as the conditions under which these mechanisms function.

Connection 2: The Structural and Experiential Dimensions of Neighborhood

Two aspects of the experiential neighborhood are especially pertinent to the linkages between structure and mental health: (a) ambient hazards, the presence of threatening conditions like violent crimes, graffiti, gangs, and drug use; and (b) social cohesion, the extent to which people in the neighborhood know one another.[5]

- The neighborhood clusters are associated with the perception of the neighborhood as threatening. *Three types of neighborhoods are distinctive: the most impoverished areas, which on average are seen as most hazardous, and the middle-class and affluent communities, which tend to be seen as least hazardous*. Between these extremes, adolescents tend to rate their neighborhoods similarly.
- Social cohesion, a second dimension of the experiential neighborhood, is differentiated only slightly by the set of neighborhood types, and no one, neighborhood type emerges as distinct from the others. *Adolescents living in neighborhoods characterized by a high density of long-term residents*

tend to perceive their neighborhoods as socially cohesive ($r = .07$; $p \leq .05$), but the zero-order correlation with ambient hazards is not statistically significant.

- However, *both social cohesion and ambient hazards are associated with residential stability in a multivariate analysis that controls for neighborhood stratification and for how long the adolescent has lived in the neighborhood* (not shown; see Aneshensel & Sucoff, submitted, for analyses). In other words, adolescents who live in residentially stable neighborhoods tend to see their communities as both safe and cohesive irrespective of how long they themselves have lived there.

Massey and Denton (1993) found structural conditions such as these to be detrimental to mental health at least in part because they contribute to an environment that is experienced as noxious and barren. The experience of environmental threat is likely to influence mental health directly, as is the sense that one is living among people who are socially disconnected from one another. The latter is further evidenced by the vast literature on social stress and social support, especially with regard to disorders like depression and anxiety.

The influence of the experiential neighborhood may entail an interaction with individual-level risk factors. In other words, community conditions may be immaterial to persons who are not predisposed to these behaviors, but may facilitate the development of disorder among those who are especially vulnerable because of their exposure to other risk factors. In our data, both ambient hazards and social cohesion are associated with adolescent mental health.

- *Perceptions of one's environment as threatening are positively correlated with symptoms of depression* ($r = .17$; $p \leq .001$), *anxiety* ($r = .13$; $p \leq .001$), *oppositional defiant disorder* ($r = .13$; $p \leq .001$), and *conduct disorder* ($r = .22$; $p \leq .001$).

- *Social cohesion is inversely correlated with depression* ($r = -.16$; $p \leq .001$*), anxiety* ($r = -.07$; $p \leq .05$), *and oppositional defiant disorder* ($r = -.08$; $p \leq .001$), *but it is not correlated with conduct disorder*.

The correlations for ambient hazards are generally stronger than those for social cohesion, but both sets of correlations are of modest magnitude. Nevertheless, these associations establish the viability of the hypothesized linkages between neighborhood structure and adolescent mental health.

Connection 3: Neighborhood and the Stress Process

Thus far, we have been concerned with the ways the experiential neighborhood directly influences the risk of mental, emotional, and behavioral disorder among adolescents. This connection exists, at least in part, because neighborhoods characterized by threatening conditions, such as drugs, gangs, and violence, are inherently stressful, especially in the absence of social resources that might otherwise control or offset these threats. *However, the experiential neighborhood is also likely to influence mental health indirectly.*

We employ the framework of the stress process to link neighborhood to adolescent mental health, as illustrated in Figure 2. Stress processes are by no means the only potential connection between these two domains, but this orientation is a useful departure point because the connection between stress processes and mental health is generally well established. Furthermore, the notion that individual exposure to stress is related to the amount of stress in one's social environment seems almost self-evident, as does the corollary that the connectedness of persons in one's social environment influences one's own immediate access to social support.

The three major components of the stress process as formulated by Pearlin are stressors, mediators, and outcomes (Pearlin 1989; Pearlin, Lieberman, Menaghan, & Mullan 1981). S

S*tressors*-- Stressors refer to environmental demands that exceed the ordinary adaptive

capacity of the individual, or to closed opportunity structures for the satisfaction of individual needs (Aneshensel 1992; Lazarus 1966; Lazarus & Folkman 1984; Menaghan 1983; Pearlin 1982). Stressors are elements of the environment, external to the individual. Stress refers to an internal state of arousal resulting from exposure to stressors. Thus, stress is not an inherent attribute of external conditions, but emanates from a lack of fit between the individual and the environment. In an analogy to engineering physics, Smith (1987) maintained that stress should be seen not merely as load, but as load relative to the supporting surface. Nevertheless, socioenvironmental conditions differ in their capacity to evoke stress: Some conditions threaten virtually everyone; others are almost uniformly navigated with ease.

Although stressors come in various shapes and sizes, our theoretical model emphasizes problematic conditions that (a) parallel the experiential dimensions of neighborhood described above and (b) generate psychological distress. A likely candidate to fill this mediating role is *individual exposure to trauma and crime*, as illustrated in Figure 5. *One of the two necessary connections already is well established in the literature on traumatic stressors*; exposure to such events is *a known risk factor* for certain psychiatric disorders. *The second connection concerns the link between neighborhood and exposure to traumatic stressors*. *Suggestive evidence* for this connection is found in a study *linking neighborhood disadvantage to exposure to violence and other life event stressors among school-aged children* (Attar et al., 1994). Furthermore, *such exposure is also likely to be inversely associated with the social cohesion of the neighborhood*, because erosion of the social psychological community permits an increase in rates of antisocial behavior (Massey & Denton 1993), which, in turn, necessarily increases rates of victimization.

Mediators.--The second component of the stress process*, mediators, comprises the social, personal, and material resources that regulate causal relationships between stressors and outcomes*. Of numerous potential mediators, *we focus on social integration and support; these concepts parallel our focus on the social cohesion of neighborhoods*. Definitions of support

abound, but most include a person's basic social needs-- affection, esteem, approval, belonging, identity, and security-- being satisfied through interaction with others (Cobb, 1976; Thoits, 1982). *Numerous studies have demonstrated that social support is inversely related to mental, emotional, and behavioral disorders*. *In addition, the impact of stress is thought to vary inversely with resources* (i.e., exposure to stress is most damaging when resources are scarce or absent; Aneshensel, 1992). In the literature on social stress, this conditional relationship is referred to as *stress buffering.*

As can be seen in Figure 5, *social resources are hypothesized to mediate the impact of neighborhood on mental health*. Again, one of the two necessary connections*, the link between support and disorder, is well established in the empirical literature*. *The second connection, between neighborhood and support, is suggested by the literature on the structure of social networks and the derivation of social support* (DuBois & Hirsch 1990; Sampson 1988). *The precise nature of this relationship between individual level support and neighborhood cohesion, however, requires further specification*. We expect, too, that social support lessens in the context of threatening environments that lead people to withdraw from their communities, diminishing the pool of attractive social actors in the immediate environment.

These elements of the stress process entail aspects of social life that are intrinsic to the neighborhood: Individuals who live in threatening and inhospitable environments are more likely to be victimized than those who live in benign communities and to have attenuated social connections that impede efforts, both individual and collective, to neutralize macro level stressors. From this perspective, exposure to trauma and crime constitutes what Pearlin refers to as *primary stressors* (Pearlin, Mullan, Semple, & Skaff 1990).

Neighborhood and mental health are also likely to be linked through the proliferation of secondary stressors. According to Pearlin, secondary stressors are problematic circumstances that arise as a consequence of a primary stressor, but are not inherent in the original stressful condition.

In this instance, secondary stressors are problems that have arisen as a result of threatening conditions in the neighborhood but that do not directly entail firsthand transactions with the neighborhood. For example, concerns about street crime, drug dealing, and gangs may lead parents to be fearful for their children and to impose rules about where they may go, with whom, and at what times. In turn, these restrictions may lead to arguments not about the quality of the neighborhood, but about the adolescent's desire for increased autonomy. In this example, parent-child conflict is considered a secondary stressor because it arises as a result of neighborhood conditions, rather than concerning the neighborhood per se.

Although unsafe neighborhoods are no doubt stressful in and of themselves, *we believe that the most potent psychosocial consequences of neighborhood are found in the proliferation of secondary stressors*. The most visible consequences of living with poverty and urban decay are just that, surface manifestations, no matter how repugnant or deadly. Decrepit and abandoned housing is consequential not merely because it shelters residents inadequately, but because it contributes to a worldview that permeates all facets of life. The same observation can be made for the presence of crime, drug dealing, and the other social problems that have become commonplace features of too many neighborhoods. *Thus, the investigation of neighborhood linkages to mental health should not be restricted to domains that clearly are neighborhood, but should extend into diverse areas of life that are shaped by the neighborhood context.*

Outcomes. The third component of the stress process, outcomes, refers in this instance to adolescent mental health and is illustrated in Figure 5. *The general premise that rates of disorder vary as a function of neighborhood structure is supported by our research as reported above, as is the supposition that these effects depend upon the experiential neighborhood as well. These data also demonstrate, however, that the effects of neighborhood are specialized rather than universal.* In other words, neighborhood attributes do not uniformly elevate risk for all disorders (Kupersmidt et al., 1995*). For example, socioeconomic stratification appears to be more important to externalizing disorders, while residential stability appears to be more important to internalizing disorders.*

One explanation for this specificity can be found within the mediating pathways of the stress process. The immediate influence upon mental health consists of the stressors to which adolescents are exposed and the resources to which they have access. Although noxious neighborhoods are expected to generate pervasively high levels of stress, this association is unlikely to be present for each and every possible type of stressor. Instead, attributes of neighborhood are likely to generate specific kinds of stressors, which, in turn, increase the risk of distinct types of disorder. The type of outcome most affected by neighborhood, then, depends on the dimension of neighborhood in question and its consequences for the array of stressors that impinge upon residents' lives.

Nevertheless, *we conceive of the impact of neighborhood as diffuse rather than disorder-specific*. Whereas pernicious neighborhoods may not elevate all stressors, their effects are likely to extend to numerous sources of stress whose influence is felt across a broad band of mental, emotional, and behavioral functioning. For example, residents of poverty-stricken neighborhoods may be spared the intense pressures of the upper echelons of corporate life, but they are at elevated risk for encountering both closed opportunity structures and extreme financial duress; the poor neighborhoods may be most conducive to oppositional defiant behaviors, whereas affluent areas may be most susceptible to anxiety and depression.

The diffuse impact of neighborhood means that its mental health effects must be sought across multiple manifestations of disorder. Examining only one disorder, such as depression, is informative about the social etiology of depression, but yields potentially misleading conclusions about the mental health effects of neighborhood. The etiologic impact of neighborhood for a single disorder is distinct from and cannot be equated with the overall effect of neighborhood on mental health. This principle has been demonstrated theoretically and empirically for the etiologic role of stress for specific disorders versus its overall impact on mental health (Aneshensel, Rutter, & Lachenbruch ,1991).

The same principle applies to neighborhood. That is, the use of a single disorder provides unbiased estimates of the etiologic role of neighborhood for that disorder, but underestimates the total mental health effects of neighborhood. Equally important, the misclassification of persons with other psychiatric disorders provides biased estimates of the impact of neighborhood-related stressors (Aneshensel et al., 1991). Consequently, research into the mental health effects of neighborhood must evaluate the full spectrum of potential outcomes. Each individual piece of research need not implement this desideratum, but the field as a whole should strive to accomplish this end.

Implications for Prevention

We have described several pathways through which the mass organization of society may affect the individual in ways that are consequential to his or her mental health. Our primary emphasis has been on stratification and its implications for exposure to stress and access to resources, as well as on known antecedents of mental, emotional, and behavioral disorder. This framework sets individual experience within a social context comprising both proximal and distal elements and, thus, identifies several strategic points of intervention.

This perspective is especially useful with regard to young people because their embedment within larger social orders is sometimes overlooked in favor of more immediate social influences, particularly those of family and peers. *Connections between the structural attributes of neighborhoods and collective measures of disorder demonstrate that strategies to promote mental health must take into consideration the macro level context in which people live.* Examining individual disorder within these larger social orders also relieves families of the total burden of responsibility for the health and well-being of their children. *Separating factors that are under parental control from those that are not can encourage families to exert their influence in areas in which they can be efficacious.*

The most distal elements of social organization considered here-- socioeconomic stratification, racial/ethnic segregation, and residential stability-- are not amenable to rapid or simple modification. Nevertheless, these macro-level factors should not be cast aside as immutable, no matter how resistant to change. The variation across neighborhoods that generates these systems of social organization is itself testimony to the potential for reorganization. *At minimum, information about the impact on mental health of the structural components of neighborhood should help to identify high- risk neighborhoods as locations of intervention*. *The experiential neighborhood*, which is seen as a conduit through which structure permeates the lives of individuals, *offers a potentially powerful point of prevention*. *The*

individual's experience of his or her neighborhood as threatening and socially disconnected is linked on one hand to the structural attributes of the neighborhood and, on the other, to the risk of disorder. These connections suggest that altering the experiential neighborhood may be a means of modifying the impact of structure on mental health. *We suggest that preventive interventions target the experiential neighborhood to lessen ambient hazards and to promote social cohesion, which may combine to lengthen residential tenure and, thus, create a social climate more favorable to we*ll-*being.* Examples of this strategy include community-based efforts such as neighborhood watch programs that reduce crime and violence, offer attractive alternatives to street life, and foster a sense of community.

An important feature of such community-based activities is an emphasis on the development of local initiatives and leadership as distinct from monolithic programs that flow from the top down. *Although the structural attributes of neighborhoods may be useful in identifying high-risk neighborhoods, these neighborhoods differ from one another in the specific constellations of stressful conditions that jeopardize mental health.* Local control is desirable because residents are most familiar with the experiential neighborhood and know firsthand its most salient features. Moreover, community-based implementation requires considerable interpersonal interaction among residents, which can itself foster social cohesion and thus indirectly advance the goals of the intervention (Butterfoss, Goodman, & Wandersman, 1993). *This strengthening of the social infrastructure of a neighborhood may also enhance its social control functions (Sampson & Laub 1994).*

A desirable aspect of these kinds of community-based interventions is the potential to benefit not only those who participate, but also those who do not. In other words, change in the social environment affects all who live within that environment, regardless of whether they are responsible for initiating the change.

Likewise, prevention strategies need not necessarily focus on the neighborhood as an entity, but could instead target those who are most at risk within specific types of neighborhoods. For example, some interventions might appropriately be designed for children from high-risk families, because they appear to be most affected by their exposure to high-risk neighborhoods (Attar et al., 1994).

In this regard, *further research is needed on the impact of the racial/ethnic composition of neighborhoods and their sociocultural components*. Our own research suggests that the adverse effects of socioeconomic disadvantage may be offset somewhat among those who live near people of similar backgrounds (Aneshensel & Sucoff, submitted). Such homogeneity may make it easier to forge relationships with one's neighbors, thus facilitating access to social resources, including social support and assistance with problems inherent to living in poverty.

This observation does not mean that segregation has beneficial consequences. Rather, it calls attention to the potentially elevated risk of individuals who are minorities in their neighborhoods, irrespective of their own racial/ethnic background and, possibly, their own socioeconomic circumstances. The potential interaction between race/ethnicity and the racial/ethnic composition of one's community requires further examination, especially in the context of contemporary intergroup tensions and conflict. *Indeed, interventions on intergroup conflict resolution may have indirect benefits to community mental health.*

Our emphasis on neighborhood is complementary to family-based interventions because at least some neighborhood effects are transmitted to children via their parents. For example, the social isolation of hyper-segregated communities impedes the job-seeking efforts of residents (Wilson 1987), whereas unemployment, a major stressor, elevates the risk of disorder (Dooley, Catalano, & Hough 1992; Dooley, Catalano, & Wilson 1994). *Parental economic stressors, including job loss, appear to jeopardize the emotional well-being of children by compromising parenting behavior* (Conger et al., 1992; Elder & Caspi, 1988; McLoyd, 1989, 1990; Sampson

& Laub, 1994). *In addition, the fatalism experienced by parents whose lack of education and skills have steered them into low-paying, dead-end occupations can translate into child-rearing practices that hamper the development of self-efficacy and hence impede adaptation to stress (Kohn, 1972;* Pearlin & Radabaugh, 1976; Ross & Mirowsky, 1989; Wheaton, 1983). *These connections suggest two points of intervention: the development of parenting skills, especially under conditions of stress, and the provision of support to parents that enables them to cope more effectively with difficult life circumstances. It also underscores the importance of community mental health services, because poor parents typically lack the financial means to pay for treatment.*

We want to comment too on the potential impact of the physical environment on the mental health of its residents. The pervasive correlation between ambient hazards and indicators of adolescent mental health suggests that altering the material elements of neighborhood should be considered as an intervention strategy. Massey and Denton (1993) contend that the physical decay of neighborhoods plays a crucial role in the emergence of deviant behavior and social withdrawal, and they assert that a critical threshold of housing abandonment triggers an exponential acceleration of these processes.

In Los Angeles, for example, graffiti has emerged as an important element of the physical environment. Graffiti is often a territorial marker, declaring turf, warning off rival gangs, and signaling the need to both exercise extreme caution and conform to prescribed behaviors. As such, the graffiti itself represent a threat. In recognition of this cycle, some neighborhood coalitions have launched graffiti-control projects. Although the physical removal of graffiti does not eliminate gang-related threats and promote mental health, the collective action required to mount such efforts constitutes an investment by people in their neighborhoods. Concerted responses of this type may act as brakes to neighborhood decline, especially in areas that are teetering on the edge of catastrophic decline.

Finally, let me say a word about the evaluation of preventive interventions The impact of neighborhood on mental health appears to be specialized, manifest across some dimensions of functioning but not others. In other words, neighborhoods are not arrayed on a single continuum of good to bad with regard to implications for mental health. Consequently*, interventions that seek to modify aspects of neighborhood should not be expected to generate uniformly positive effects across all types of disorder.* Instead, these effects should be sought in the outcomes most clearly relevant to the nature of the intervention. *For example, an intervention that enhances the social control functions of neighborhood might be effective with regard to anxiety but have a negligible impact on depression, whereas depression might be more responsive to interventions that foster a sense of community. If interventions and measured outcomes are misaligned, we run the risk of erroneously concluding that an intervention has been ineffective.*

Similarly, some neighborhood effects may be pervasive while others are felt only among a *select subgroup of the population*. This possibility is anticipated in theoretical models that specify main versus interactive effects of neighborhood. For example, living in a neighborhood taken over by gangs and beset by rampant drug use and dealing is expected to adversely affect mental health, but this type of neighborhood may have the greatest impact on members of high-risk families (Kupersmidt et al., 1995). Interventions that "clean up" a neighborhood would tend to be manifest in a general improvement in mental health on the one hand, and, on the other, in improvements among only some residents. Consequently, both of these possibilities, modal and contingent effects, need to be assessed in the evaluation of preventive interventions.

Conclusion

The theories and research we have presented here establish the utility of placing prevention strategies within a larger ecological framework, one that takes into consideration the structural and experiential contexts within which individual-level processes take place. This ecological orientation is especially valuable because contextual factors appear to interact with individual-level processes. In other words, the impact of individual risk factors on mental health appears to be modified by the context in which these risk factors occur. This approach may help identify communities in which residents are most at risk for developing mental, emotional, or behavioral disorder and, equally important, those residents who are most at risk within specific types of neighborhoods. The ability to target areas and subpopulations in this manner could maximize the effectiveness of preventive intervention strategies. This goal is especially important for young people: This life course stage offers unique opportunities for prevention because psychiatric disorder often first appears during these ages, pre-adult onset is a major risk factor for subsequent adult disorder, and the benefits of early prevention accrue over the entire life course.

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Endnotes

. . . . These neighborhood characteristics have been operationalized in two ways: as sets of continuous variables describing the different neighborhood characteristics (e.g., Brewster 1994; Klebanov, Brooks-Gunn and Duncan 1994) and as composite measures of multiple characteristics (e.g., Hogan and Kitagawa 1985; Kupersmidt, Griesler, DeRosier, Patterson, and Davis 1995; Peeples and Loeber 1994). The multivariate approach assumes linear relationships between neighborhood context and the dependent variables, and that the neighborhood variables are not highly correlated with one another. If these assumptions are met, this approach has more statistical power than techniques that collapse information into composite measures. Moreover, it is more useful from a policy standpoint because it identifies the "independent" contributions of various dimensions of neighborhood structure. In contrast, composite measures, such as factor scores or typologies produced using cluster analysis, are more appropriate when neighborhood effects are nonlinear or neighborhood variables are colinear (White 1987). Crane (1991) and Hogan and Kitagawa (1985) demonstrate nonlinearity for at least three outcomesChigh school completion, adolescent pregnancy, and nonmarital childbearing: The risk of these events is dramatically higher in the poorest neighborhoods than in any other type of neighborhood.

2..Subjects were selected from a stratified, three-stage, area probability sampling frame of Los Angeles County: census tracts, blocks, and households, which were screened to ascertain whether an adolescent between the ages of 12 and 17 years lived at the address as a permanent resident; in eligible households, one adolescent was randomly selected. Of the 13,925 household addresses sampled, 1,417 were eligible, and of these, interviews were completed with 877 (61.9%) adolescents. The sample is weighted to the 1990 Census racial/ethnic distribution, to a flat age distribution, and to adjust for variability in selection probabilities resulting from households with multiple eligible adolescents.

3..Census terminology used in conjunction with Census data.

4..Depressed mood was measured with the Children's Depression Inventory (Kovacs and Beck 1977), a 21-item inventory that assesses symptoms of depression during the past 2 weeks. Responses were scored from 0-4, and included choices such as "I do not feel sad," "I feel sad sometimes," "I am pretty sad all the time," and "I am so very sad that I can't stand it" (á = .86). Anxiety was assessed with a subset of eight items, e.g., "feeling nervous or shaky," from the Hopkins Symptom Checklist (Derogatis, Lipman, Rickels, Uhlenhuth, and Covi 1974). Items were self-rated for the past 2 weeks based on response categories ranging from (1) "not at all" through (5) "extremely" (á = .86). The two externalizing disorders were assessed using subscales of the Stony Brook Child

Psychiatric Checklist-3R (Gadow and Sprafkin 1987). Conduct disorder was assessed as a count (0 vs. 1) of 13 behaviors, e.g., "stolen or taken something belonging to another person" and "had a serious physical fight with someone," over the past year (á = .73). Oppositional defiant disorder was assessed in the same manner as conduct disorder for 6 behaviors, e.g., "blamed other people for your own mistakes" and "taken your anger out on others or tried to get even" (á = .74).

5..The adolescent's subjective appraisal of his or her neighborhood was assessed with a study-specific list of Likert-type attributes, rated with response categories ranging from (1) "strongly agree" to (4) "strongly disagree." The ambient hazards measure asks about 11 potential dangers and demonstrates excellent reliability (á = .90): safety, violent crimes, drive-by shootings, property damage, gangs, drug use and dealing, graffiti, whether the police give people a hard time for no reason, and whether the neighborhood and housing are clean (scoring reversed), ugly, and in good shape (scoring reversed). The social cohesion measure demonstrates acceptable reliability (á = .64) across its three items: adults know each other, kids know each other, and people are friendly. Ambient hazards and social cohesion are modestly correlated with one another ($r = -.27$; $p \leq .001$).

New Directions: Interaction Contexts in Prevention Science and Community Mobilization[1]

Abraham Wandersman

Department of Psychology, University of South Carolina at Columbia

Many disciplines and stakeholders have an interest in social conditions, stress, resources, and health and their implications for disease prevention and health promotion. The disciplines include sociology, psychology, economics, public health, and political science. The stakeholders include social scientists, federal funding agencies, politicians, prevention practitioners, and the general public. Assuming that the stakeholders are concerned with the physical and mental health of our society, we need to look at (a) what research is being performed on *social conditions*, *stress*, *resources*, and *health* and (b) how will it influence the millions of people in our society. These premises serve as the basis of my comments on the papers addressed to the interactional contexts of stress.

1 I would like to thank Maurice Elias, Jean Ann Linney, Leonard Pearlin, Edison Trickett and especially Ann Maney for their helpful comments.

What We Are Doing (And not Doing) In the Mental Health Field on Social Conditions, Stress, Resources, and Mental Health

There are several conceptual frameworks in the stress and coping research literature that subsume concepts in Pearlin s stress process model but also create some interdisciplinary bridges to the psychology of social conditions, stress, resources and mental health (Baum, Singer, & Baum, 1981; Cowen, 1991; Kelly & Hess, 1987; Lazarus & Folkman, 1984; Pearlin, 1989; Wandersman, 1990; Wandersman, Andrews, Riddle & Fancett, 1983). Perhaps consideration of the expanded content of these frameworks can to help us better understand the context in which this stocktaking of research on community and physical and mental health is taking place-- what we have learned and what is missing.

- *The distal and contextual factors in these frameworks (see Figure 1) extend the list of conditions that influence the prevalence of stressors beyond demographic categories to include conditions in the physical environment as well as non-demographic characteristics of social, economic, and community environments* . For example, environmental policies on building and highway codes (distal/contextual factors) reduced the loss of lives and property (stressors) in California caused by earthquakes, which in turn reduced personal stress and negative mental health outcomes. *Both policy interventions and individual interventions* are used when distal/contextual factors become the focus of prevention efforts (e.g., unemployment as an individual situation to be changed versus unemployment as a systemic problem to be resolved). A major strength of this volume in general, as well as the papers by Aneshensel and Sucoff (1996) and Wellman and Gulia (1996), is the recognition and prominence given to distal/contextual factors.

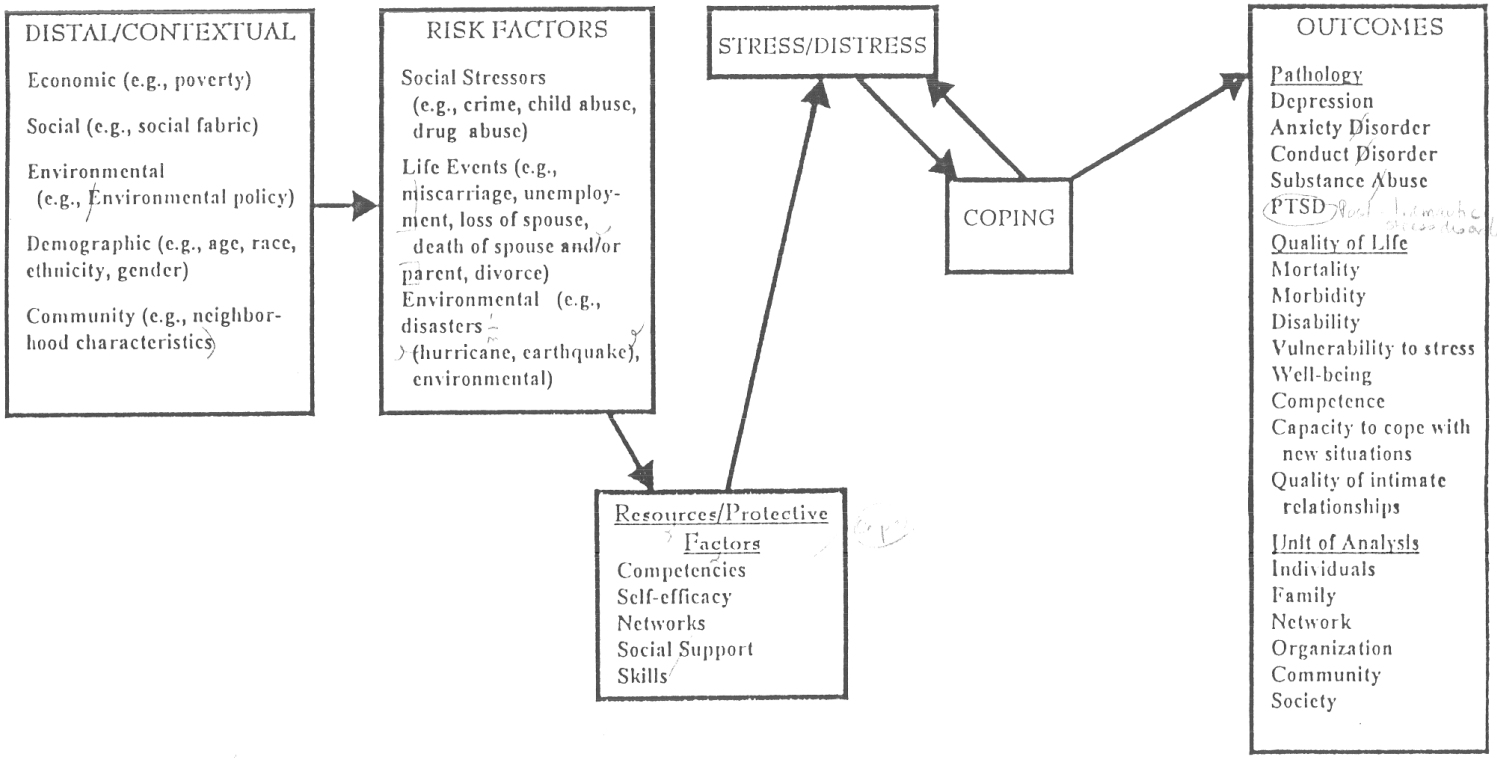

Figure 1. An Environmental Framework of Psychosocial Factors in Health and Illness

- *The stressors in these broadened frameworks also extend beyond social stressors such as negative life events or chronic role strains to include traumatic events (e.g., crime, child abuse, drug abuse) and excessive demands in the physical environment (e.g., natural and human-made disasters, noise, toxic contamination, and high density*). It is not unusual for preventive interventions to substitute the goal of reducing the occurrence of these risk factor or stressor for that of reducing a disorder.

- *Expanded protective factors or resources in these elaborated frameworks influence the social stress process at two points: (a) in the cognitive appraisal of a risk or stressor and (b) as cognitive-behavioral influences on coping strategies. As* a result, not only are resources such as competencies, self-efficacy, social support, and special skills often the target of preventive interventions, so too are various cognitive-behavioral coping strategies. These can range from the elimination of exposure to a stressor to the provision of instrumental aid or redefinition of meaning of the stressor, from temporary reductions in exposure through hospitalization, vacations, or recreational activity, to support groups, psychotherapy or counseling, to biofeedback, stress inoculation training, desensitization, and reciprocal inhibition therapies.

- *Expanded frameworks also present a broad set of outcomes that include positive mental and physical health as well as disorder outcomes.* They are based on outcomes considered important in behavioral, psychodynamic, and humanistic interventions (Ricks, Wandersman, & Poppen, 1976; Wandersman & Moos, 1981). *They recognize the possibility of reciprocal effects between outcomes as well as the possibility of a reciprocal effect between an outcome and resources, stress exposure, or environmental conditions.*

When broadened stress and coping frameworks are translated into preventive inverventions they are commonly conceptualized as dimensions that overlap with, but do not completely correspond to those of the social “stress process” model.

- Timing of the intervention refers to whether the intervention occurs before the individual becomes symptomatic (primary prevention), in the early stages of symptom development to avoid progression of the disease (secondary prevention), or after disease onset to reduce its duration and the level of impairment it brings.

- Level refers to the unit of analysis the intervention is attempting to change (e.g., individual, family, networks).

- The structure or mechanism more specifically describes the medium of the intervention. For example, an intervention can aim to change individual outcomes (level) by working with family support strategies (structure).

- Content describes the substance of the intervention (e.g., social support, skill building).

- The value system describes values embedded in the intervention and how the intervention operates. For example, the medical model puts the intervention in the hands of an expert who will help alleviate suffering in the individual.

What Is Happening with our Interventions and Are They Reaching the Population at Large? A Role for Community Mobilization

Wandersman, et al. (1995) discuss analyses, reports, and commissions that have analyzed the status of children, youth, and families in the United States and report that we are a nation at risk or a nation in jeopardy in regard to many social indicators such as alcohol, tobacco, and other drug use; adolescent pregnancy; single-parent families; youth violence; and domestic violence (Bronfenbrenner, 1995; National Research Council, 1993; U.S. Advisory Board on Child Abuse and Neglect, 1995). In this area alone the need for effective prevention and health promotion programs and policies is enormous.

University-Directed Prevention Science Strategies

The science of prevention is being actively pursued in universities and institutes throughout the United States in projects funded by federal agencies (e.g., National Institute of Mental Health, National Cancer Institute, Centers for Disease Control and Prevention) and foundations (e.g., Grant Foundation). These research programs are attempting to build a prevention science-- explaining what works for what types of problems with which types of children, youth, and families. Many of these well-funded studies are multisite, experimental designs. The results show limited outcomes (e.g., Mrazek & Haggerty, 1994). Yet no matter how well developed and how efficacious/effective these prevention science programs are, they do not directly reach the 99% of the population that does not come into contact with "state of the science research" programs. If we want to see a positive change in the dire statistics, then we need to understand and improve the practice of prevention -- the prevention programming that is offered day in and day out in all the schools and communities of our society. We need to bring more of what prevention science does know into our communities. There are several paths that can be simultaneously pursued to

improve prevention and health promotion efforts at the community level. (Wandersman, Morrissey, et al., submitted).

Bringing prevention science to scale. One strategy involves bringing university-driven prevention science programs to scale. The impact of successful prevention programs will be limited if they are not widely tested, disseminated, and adopted (e.g., Fishbein & Hornik, 1995). Multiple considerations are responsible for these limits. *One important consideration is the role of contextual factors* (Linney, 1991). A program that works in one part of the country with a certain target group (e.g., age, race, sex) or a certain provider system does not necessarily work the same way with another target group or operating system. *Research that empirically investigates the contextual factors that influence effectiveness in various community settings and adoption by community providers with a variety of target groups is essential*. Elias (1993) and his colleagues are conducting such a study; they are investigating the adoption of all preventive and social competency programs in all of the New Jersey school districts.

Technology transfer. *Technology transfer attempts to bring to practitioners the basic knowledge generated by research to practitioners. Generally, it involves education, training, and dissemination of information through conferences, journal articles, and reports or brochures*. The literature on technology transfer is estimated to contain more than 10,000 citations (Backer, David, & Soucy, 1995). *The National Institute on Drug Abuse monograph edited by Backer, David, and Soucy offers an excellent set of articles on issues in technology transfer and suggestions for improving technology transfer*. An important example of a technology transfer approach of prevention science to practice is the prestigious Institute of Medicine report, Reducing Risks for Mental Disorders (Mrazek & Haggerty, 1994). The report describes a preventive intervention science research cycle that progresses from research on defining disorders to risk and protective factor research to efficacy trials (rigorous pilot studies and confirmatory and replication trials) to effectiveness trials (extending the initial positive findings in large-scale field trials) to the researcher facilitating the dissemination, adoption, and ongoing evaluation of the program in community service settings (p. 517). This approach grapples with the challenge of bringing prevention science to scale.

Outcome-oriented community research. Another important path involved in broadening prevention programs into our communities involves performing more research on understanding communities: how they are structured, how they function, and how community characteristics influence mental health outcomes. The works of Aneshensel and Sucoff (1996) and Wellman and Gulia (1996) provide excellent examples of the type of research that is being done but needs to be built upon.

Community-Directed Prevention Strategies

A different, yet related, model of prevention and health promotion is strong and continues to evolve in the public health field. (The discussion below is largely based on Butterfoss, Goodman, & Wandersman,1993). Health-promotion specialists have stressed the importance of multiple interventions aimed both at individuals who are at health risk and at risk-producing environments and policies (McLeroy, Bibeau, Steckler, & Glanz, 1988; Pentz et al., 1989; Stokols, 1992; Winett, 1995). The current emphasis on multiple interventions at multiple levels of the social ecology is a response to the severity and complexity of chronic health conditions that are rooted in a larger social, cultural, political, and economic fabric. *The current wisdom in health promotion holds that targeting the behavior of individuals without also intervening at these other social levels that shape behavior will not have as great an impact on health status. This view has led to the development of a community coalition model for prevention and health promotion. The coalitions and the programs and policies they foster are community-directed rather than university-directed.*

Two definitions capture an understanding of coalitions:

1. An organization of individuals representing diverse organizations, factions, or constituencies who agree to work together in order to achieve a common goal. (Feighery & Rogers, 1989, p. 1)

2. An organization of diverse interest groups that combine their human and material resources to effect a specific change the members are unable to bring about independently. (Brown, 1984, p. 4)

The development of coalitions of community agencies, institutions, and concerned citizens to combat chronic health conditions is gaining popularity as an intervention aimed at strengthening the social fabric. Currently, hundreds of millions of dollars are being invested in coalition development as a disease-prevention and health-promotion intervention. The following examples target neighborhoods and networks--. interaction contexts in the community:

- The *Center for Substance Abuse Prevention (CSAP*)which has funded 250 *community partnerships* throughout the United States
- The *"Fighting Back" substance-abuse treatment and prevention p*rogram funded *by the Robert Wood Johnson Foundation*
- *SAFE KIDS-- local, state, and national coalitions to prevent childhood injuries*-- supported *by Johnson & Johnson*
- *The Kellogg Foundation's Community Based Public Health Initiative* funds consortia of schools of public health, local health care agencies, and community-based organizations to promote community-based public health training and service.
- *The National Cancer Institute's COMMIT and ASSIST community tobacco-control programs*, funded by the National Institutes of Health
- The *PATCH cardiovascular health-promotion program granted by the U.S. Centers for Disease Control and Prevention*
- *Native American, tribal health-promotion efforts sponsored by the U.S. Office of Minority Health*
- *Comprehensive Community Initiatives for Children and Families, staffed by the Aspen Roundtable and funded by an eight-foundation consortium.*

A discussion of coalition functioning should take into account a coalition's stages of development, including formation, implementation, maintenance, and the accomplishment of goals or outcomes. For instance, we are evaluating several local community partnerships that are funded by CSAP for preventing the abuse of alcohol, tobacco, and drugs. Figure 2 illustrates the general model being used for their development.

The formation stage occurs at the initiation of funding. The agency that is granted the funding (lead agency) convenes an ad hoc committee of local community leaders. The ad hoc committee nominates influential citizens to serve on committees representing health care, business, education, religion, criminal justice, neighborhood organizations, the media, and other sectors of the community. Training on prevention goals, issues, and tasks takes place. *The implementation stage occurs as each of the committees conducts a needs and resource assessment to determine the extent and nature of its constituents' concerns and resources in regard to alcohol, tobacco, and drug abuse.* The needs assessment consists of secondary data as well as written questionnaires, town meetings, and interviews that are developed and conducted by the committees with input from the staff and evaluation team. *Implementation continues, with committees using the results of the needs assessment to develop a community-wide intervention plan*. *The maintenance stage consists of the monitoring and upkeep of the committees and their planned activities. The outcome stage involves the impacts that result from the deployment of communitywide strategies. The series of activities is aimed at ameliorating risk factors* (e.g., those listed in Figure 1) and thereby facilitating positive outcomes.

The generic community mobilization model can benefit greatly from contributions from multiple relevant disciplines (e.g., sociology, psychology, public health, and political science). Social stressors, negative life events, and hazardous physical environments subsume the problems that many communities are mobilizing to combat. *I would emphasize that the contextual/distal factors that influence stressors (Figure 1) and interventions (Table 1) also influence the formation and maintenance of community mobilization efforts such as community coalitions* (Wandersman, Valois, Ochs, de la Cruz, & Adkins, 1996).

Table 1

Dimensions of Preventive Interventions

Timing

Primary (distal/contextual, risk factors, resources***)***
Secondary
Tertiary

Level
Individual
Family
Networks
Organization
Community
Society

Structure/Mechanism

Groups
Networks
Policy
Programs
Setting

Content

Social support
Behavior change
Skill building
Knowledge

Value System
Medical model
Expert
Self-help
Empowerment
Values about research
(e.g., generative, executive)

Many of the coalition initiatives listed above, for instance, have a geographic (e.g., neighborhood) focus and aim to increase collaboration and networking among the sectors of the geographic community. (Figure 2)

OVERVIEW OF THE DEVELOPMENT OF A COMMUNITY COALITION

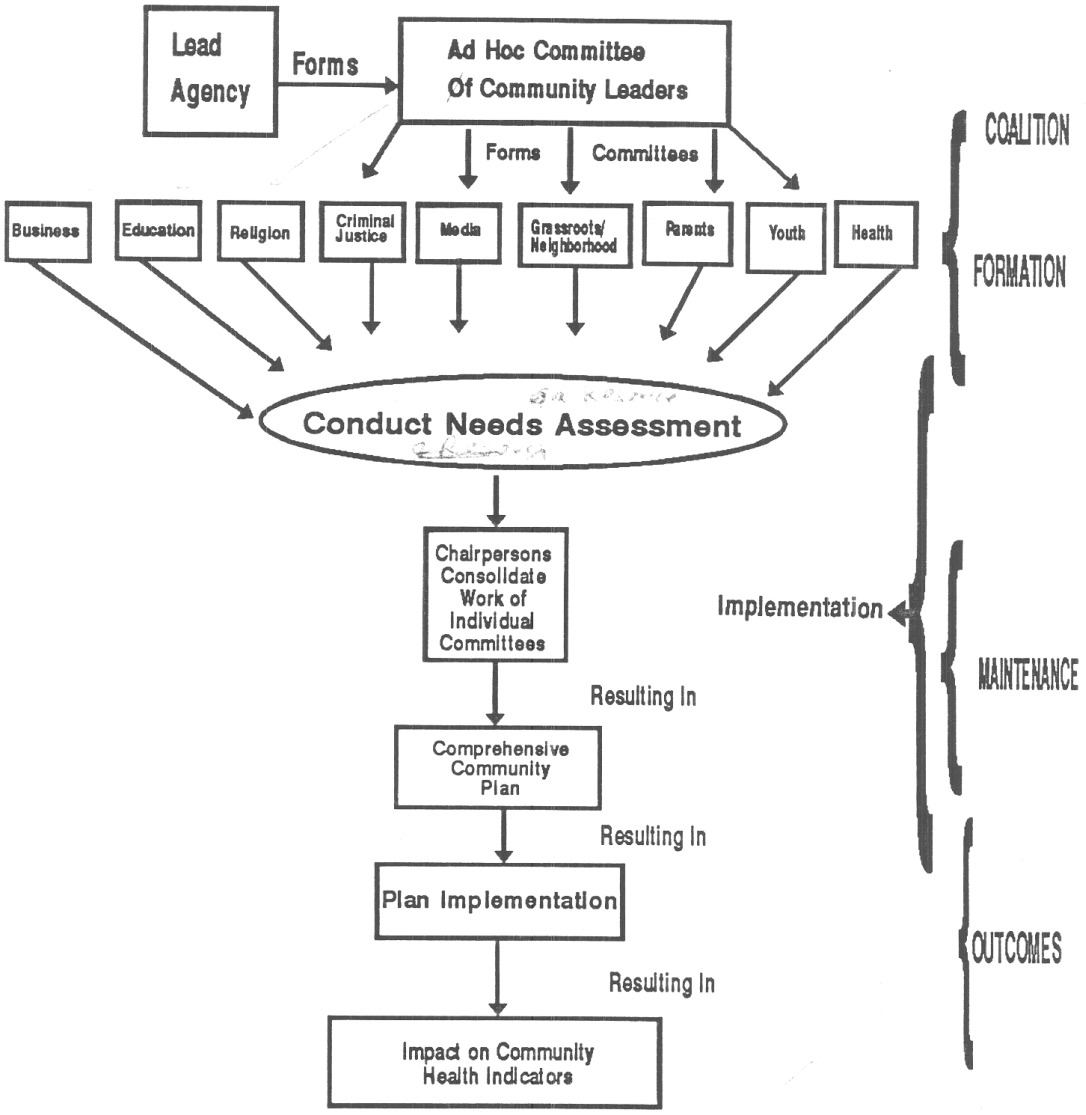

FIGURE 2

In sum, significant change in the mental and physical health of our population will require not only significant advances in university-directed prevention science programs but also research on contextual factors as they influence the adoption and adaptation of prevention programs, research on differentially salient community characteristics, and research on community mobilization for disease prevention and health promotion.

On the Scientific Base for Community-Relevant-, University-Prevention Research: Comments on Aneshensel and Sucoff and on Wellman and Gulia

Community is a term that is widely and ambiguously used in the social sciences. There are two major ways of discussing community: (a*) community as a place and (b) community as relationships and resources* (Heller, Price, Reinharz, Riger, & Wandersman, 1984). Aneshensel and Sucoff focus on the former, developing models and providing evidence for neighborhood effects. Wellman and Gulia provide an interesting counterbalance, focusing on the importance of personal communities and networks and reducing the importance of geographical location.

Aneshensel and Sucoff's, "Neighborhood and Adolescent Mental Health"

This chapter presents an excellent review of the research literature and develops a structure for examining the relationship of neighborhood characteristics to adolescent mental health outcomes. In the first section, the authors examine theories and research on neighborhoods and the relationship of neighborhood characteristics to behavioral and health outcomes. A major strength of this section is its description of the impact of neighborhood characteristics as a main effect on outcomes and as an interactive variable with individual characteristics that affect outcomes. In the second section, the authors discuss the significance of the neighborhood specifically for mental health. A major strength of this section is the presentation of models and data for two different types of neighborhood influence on adolescent mental health outcomes: (a) a main effect that "generalizes impact of neighborhood on the mental health of its typical adolescent inhabitants" and (b) a yet-to-be

conducted study of "differential impact of neighborhood contingent upon attributes of the individual." The third section explores implications of these models for prevention. ***Given the size of the community mobilization effort already focusing on adolescent outcomes, the trivial size of the average effect of neighborhood characteristics on adolescent mental health combines with the absence of mental health studies of indirect and moderating effects of neighborhood to suggest an urgent need for further research.***

Micro-neighborhoods and blocks.-- I would like to see an exploration of micro-neighborhoods and blocks included in this further research. I believe it could strengthen the evidence related to the influence of the main effects neighborhoods model on outcomes. "The microneighborhood is operationally defined as a next-door neighbor, the person in the next apartment, or the most immediate set of adjacent households" (Warren, 1981, p. 63). The block consists of the two sides of a street that face each other, with cross-streets serving as block boundaries. The block has been used as the unit of study in a number of studies, especially in looking at neighborhood crime and crime prevention (Perkins, Wandersman, Rich, & Taylor, 1993; Unger & Wandersman, 1982*). It would be useful to explore the models that Aneshensel and Sucoff propose using block-level characteristics in addition to neighborhood-level characteristics.*

Wellman, Potter, and Gulia's, "Where Does Social Support Come From?"

Wellman and Gulia (1996) present a thoughtful review of social networks that can provide comfort to those of us who are worried about the loss of community. They describe an approach to community based on personal networks. They relate personal networks to social support and review the literature on the effects of compositional characteristics of networks. *My major comment on this piece relates not to what is said, but to broadening its relationship to other chapters in the book and to the theme of the book. Networks may be a contextual factor, but the social support they can produce, under conditions well described by the authors, is generally conceptualized as a resource or protective factor. A fuller understanding of the linked roles of personal networks and social support in moderating the effects of social conditions and social stressors on outcomes is in order*. For example, in the material presented by Aneshensel and Sucoff, it is likely that networks, through social support, play an important role in moderating the

differential effects of living in a particular neighborhood. In relation to health outcomes, it would be useful to explicate the research on social networks and social support with mortality, morbidity, and general well being. *The field would benefit from additional reviews and research that would (a) expand an examination of relationships of networks and social support to include the mental health outcomes of network and support characteristics and (b) examine the potential of interventions with networks and social support to promote positive outcomes and prevent negative outcomes.*

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Commentary.
On the "Social Stress Process Model" in Prevention Research

Zili Sloboda

National Institute on Drug Abuse (ret.) and Akron University

Drawing on experiences from the field of drug abuse prevention, this commentary suggests preventive intervention approaches for persons who are at risk of or affected by stress associated with social conditions. *The potential benefits of conceptualizing exposure to stress, access to resources and effective use of resources in preventive intervention models are discussed. Three analytic guides for the formulation of strategies are extracted from the preceding chapters: the degree to which the model addresses multiple negative outcomes; common population characteristics and common etiologic pathways; and recognition of the many dimensions of stress and stressors and the importance of emphasizing resources. Operational strategies for achieving reductions in stress exposure or acquisition of resources, shaped to the needs of special populations, are proposed. They include "at-risk" differentiation of target populations, community involvement in model adaptation, the use of multiple intervention strategies, and the implementation of environmental and structural interventions to maintain improvement. Th*is is not meant to reflect a complete review of the literature on stress nor to be a comprehensive discussion on the application of findings and concepts that have emerged from these papers.

Background

The term "prevention" is applied generally to interventions before the initial onset of a disorder (Mrazek and Haggerty, 1995). The *science* of preventive intervention, that is, the design of effective models for preventing a disorder, draws heavily from the findings associated with a number of related research areas: epidemiologic research, studies that examine causal or etiologic factors and processes, basic behavioral and social science research, basic biological research, as well as from social science theory and from advances in research and statistical methods.

These fields of research specify for the prevention of research: (a) the characteristics of those most at risk for acquiring the disorder in question, such as their demographic characteristics, behavioral patterns, and experiential circumstances; (b) the distal and proximal etiologic pathways experienced in acquiring the disorder; (c) how to access at risk populations and involve them in the intervention; (d) how to best alter the trajectories of those at risk; and (e) how to demonstrate the effectiveness of the intervention.

For instance, *most preventive interventions developed in the area of drug abuse draw on a knowledge base that includes the epidemiology of drug-using behaviors (experimentation, abuse and dependence) as well as the etiologic factors associated with these drug-using behaviors. Information from these studies has greatly influenced preventive intervention models including age at onset (targeting early to middle adolescence); proximal processes for initiation of use (e.g., availability of drugs, attitudes about the social acceptability of drug use (peer relationships to drug-using behaviors), perceptions about the harmful psychological and physical effects of drug use); staging of substance use (tobacco and alcohol use generally precede drug use); and risk factors (e.g., conduct disorder, attention deficit disorder, having parents who are drug users, and family dysfunction*). *The application of* behavior change *theories,* developmental theory, and communication theory *has enabled prevention researchers to develop effective intervention models demonstrating lower levels of initiation and reducing the continued use of*

tobacco, alcohol and illicit drugs among those who begin such use (Botvin, 1995; Hawkins, Von Cleve, and Catalano, 1991; Fla;y, Hansen, Wang & Johnson, 1989, Tobler, 1992).

Opportunities for Preventing Negative Stress-Related Outcomes

In reviewing the monograph papers to develop recommendations for preventive interventions within this framework, three key areas emerged as guides: (a) the degree to which prevention intervention models are sensitive and specific to a disorder, (b) the recognition of the many dimensions of stress and stressors, and (c) the important emphasis on resources.

Generic Preventive Intervention Models

Several papers in this monograph consider the generalizability of the relationship between stress and disease. The major question is: Can we develop a generic model for the prevention of disease or disorder in any population or must the model be more specific to the cause or etiology of the disease? Answering this question depends greatly on a thorough understanding of the natural history of progression to the onset of the disorder. With a simple infectious disease, there usually is a "one germ one disease" model, which suggests that if one eliminates exposure to the germ one can prevent the disease. However, we also know that there are many approaches available to eliminate exposure: the vector for the germ (e.g., kill the yellow fever mosquito), create a barrier (e.g., use condoms during all sexual activities), or build immunity (e.g., flu shots). We also know that not all who are exposed contract the disease; some are protected genetically (e.g., sickle cell trait), and some are protected through immunity.

In the field of drug abuse, there is a movement toward general models of prevention that address not only the initiation of drug use but also other negative behaviors such as dropping out of school, delinquency, and violence. This movement is the outcome of research that indicates common population characteristics and common etiologic pathways for persons involved in these behaviors. In fact, research findings demonstrate that if a person evidences one of these behaviors, there is an increased likelihood that he or she will also be involved in at least one other (Jessor and Jessor, 1977; Johnson and Pandina, 1991; Krohn, 1995). However, it is important to demonstrate a strong relationship among these behaviors and the degree to which their etiologic pathways converge.

The development of one general model may be parsimonious, but other models that have both common conceptual bases or components and unique features more specific to the disease or condition being considered need to be delineated. The disease specific features are particularly relevant for youngsters who may have psychopathology as an etiologic condition, requiring more focused personal and clinical interventions. *For the prevention of etiological stress linked to social conditions, however, generic models as well as models that are specific to some characteristic such as developmental age are necessary.*

Dimensions of Stress

The stress concept was treated in various ways in the monograph papers. In some cases stress was used as a stimulus and in others as a response to stimuli. Stress, although dynamic, is not a process; it is a well defined and measurable psychological and physiological reaction, and has been extensively researched. "Stressors" are the sources of stimulants of the stress reaction. How persons respond to stressors depends on a number of psychological, social, physical, and cultural factors. As the papers suggest, there is variability in one's response to a stressful experience depending on these factors, as well as on the type and number of stressors involved, the duration of the stressful experience, and the intensity and level of specificity, or to use Pearlin's term, the proliferation of the experience-- meaning the degree to which each aspect of an individual's life is involved or affected; (e.g., marriage, family, school, job*). New research in this area should clarify these dimensions and their interactions and guide the choice of intervention to be developed, how long exposure to the intervention should be, and how and by whom the intervention should be delivered. Certainly, what is meant by "stress" and what types of stress or stresses are being addressed, need to be made specific.*

Resources

The final concept of interest relates to the discussion of resources. This issue bears on the core of any preventive intervention approach taken. "Resources," as discussed in these papers, includes a wide array of both interpersonal tools (e.g., social supports, maintaining employability) and instrumental tools (e.g., knowledge needed to perform tasks, having job skills) to deal with stress and stressors. *It is clear from the monograph material that social conditions affect access to resources. It is important to understand how, once the resource is accessed or taught, it is effectively used.*

Access to and effective use of resources becomes important when an individual or group is challenged by a stressful experience. These resources can form the focus of a poststress intervention. *To prepare the target population for future stressors, however, it is important to develop preventive interventions prior to any specific stressful experience*. *For example, life transitions may be accompanied by economic, social, and personal challenges that can be sources of stress for many individuals*; (e.g., entering college or the job market, marriage, parenthood, retirement, or widowhood*). Interventions or training in coping and adaptation skills beginning early in life and continuing into late adulthood would ease these transitions.*

The Conceptualization of Preventive Interventions

I

Intervention Objectives and Operations

Three conceptual areas, (a) exposure to stress, (b) access to resources, and (c) effective use of resources, are amenable for preventive intervention. *These concepts should be integrated into comprehensive prevention theory*. *The great challenge, however, is to turn theory into practice by designing operational strategies that will reduce stress exposure or improve resource acquisition and will address the needs of special populations such as women, ethnic or cultural groups, and age groups*. The evaluation of the intervention would assess the extent to which these objectives are achieved and the extent to which these achievements relate to favorable outcomes.

"At-risk" Differentiation of Target Populations

The field of prevention has moved to new definitions of interventions based on the target population and the degree to which the target population is at risk for specific outcomes. These include *universal, selected*, and *indicated* interventions. *Universal interventions* target populations that are heterogeneous relative to the risk factors in question, while the *selected* and *indicated interventions* target populations that are either at greater risk for a negative outcome or already affected by the outcome.

Universal interventions are protective and inoculative.-- They prepare populations for untoward experiences, reducing exposure to stress or enhancing the ability to deal with a stressor. These interventions can be policy interventions such as improved law enforcement

against drug trafficking, alcohol taxation, and establishing a minimum age for purchasing alcohol or tobacco products. They could include entitlement programs such as Medicaid.

A universal intervention approach that I have not yet seen is one that trains groups to interact and negotiate medical and other social service delivery systems including schools. The papers in this monograph suggest changing the interaction between the individual and our socialization agents by providing specific resources such as community media, information, or educational campaigns to enhance parenting skills, particularly for families living in compromised social and economic settings or for families with challenging children, such as those with conduct disorders. *There already are effective intervention models that change school, peer, and community norms regarding the use of tobacco, alcohol, and illicit drugs among children and adolescents. There are also models that train teachers and parents to work together to increase children's feelings of success in school, thereby reducing absenteeism and improving academic performance. The mediating mechanisms are the social bonds formed between family and school and the increased social support available to the child.*

Selected and indicated interventions.-- *For those who have already experienced a stressor or stressors*, selected and indicated approaches *could include focused crisis interventions* for job loss, divorce, rape, and other forms of victimization or for natural disaster. *Preventive interventions must address the source of the stress, resource loss resulting from the crisis, and lack of personal and instrumental resources that may have* ***preceded*** *the crisis.*

Community Involvement

When directing any of these intervention approaches to specific community groups (using "community" to mean populations that share an identifying characteristic whether area of residence or another demographic characteristic), it is important to reach out to develop their trust and to engage them in modifying the intervention model, in order to make it relevant and understandable. *Ethnographic approaches combined with input from community leaders and representatives help identify what is salient to the community, define existing sources of stress*, *establish current patterns of response, and assess available physical and social resources.* This information can be used to develop the intervention approach.

Multiple Intervention Strategies

We also have learned that some negative outcomes, such as drug abuse and HIV, demand multiple intervention strategies. *The need for several different types of strategies that target a number of behaviors or populations recognizes the broad nature of the problem and its proliferation (more than one aspect of one's life is affected*). It also acknowledges that the etiology of disorders such as drug abuse or HIV consists of several separate and interdependent pathways (e.g., HIV is not only transmitted through the sharing of injecting equipment but also through unprotected sexual activities). Furthermore, *when the population in a community is heterogeneous relative to the risk for a disorder, it is important to have universal, selected, and indicated interventions that are interrelated*. For example, a preventive intervention program for drug abuse should include strategies that target children's knowledge and attitudes about drugs as well as their skills to resist drug use and to cope with stresses in their environment. The program would need to establish antidrug norms in the school and community and arm parents so they can discuss drug abuse issues with their children.

Environmental and Structural Interventions to Maintain Improvement

Finally, on a cautionary note, it is important to include, wherever possible, environmental or structural interventions along with the educational components to maintain desirable behaviors skills. For example, many current HIV programs reach into underserved populations, providing factual knowledge about the transmission routes for infection, offering testing and counseling services, handing out condoms or sterile injection equipment and bleach, and teaching the skills needed to use them. However, nothing is being done to ensure that the target populations will access condoms and bleach themselves when the program leaves the community. An important component of these interventions then is to ensure that residents have easy access to these items in their own communities.

We are fortunate to draw from more than two decades of research that identifies the effective components of preventive interventions. Such experience and knowledge can aid in the development of effective interventions for stress-related mental health symptoms and disorders.

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