STRUCTURES AND PROCESSES OF SOCIAL SUPPORT

J. S. House, D. Umberson, and K. R. Landis

Survey Research Center and Department of Sociology, University of Michigan, Box 1248, Ann Arbor, Michigan 48106

Abstract

This chapter reviews the recent literature on social support and health and its relation to preexisting research and theory in the areas of social networks and social integration. We identify crucial directions for future theoretical and empirical work, focusing on the need to better understand the structures and processes through which social relationships affect human health and well-being. Two elements of social relationship structure are distinguished: (a) social integration, which refers to the existence or quantity of social relationships, and (b) social network structure, referring to the structural properties that characterize a set of relationships. We further identify three social processes through which these structures may have their effects: (i) social support, which pertains to the emotionally or instrumentally sustaining quality of social relationships; (ii) relational demands and conflict, referring to the negative or conflictive aspects of social relationships; and (iii) social regulation or control, referring to the controlling or regulating quality of social relationships. We also consider the social (as well as psychological and biological) determinants of levels and consequences of relationship structures and processes. In conclusion, we discuss the relevance of research and theory on social relationships and health to current demographic trends and public policy concerns.

INTRODUCTION

The study of social support, especially in relation to health, has emerged seemingly out of nowhere in the last decade. A search of the Social Science Citation Index for articles with social support in the title revealed an average...
of only two such articles per year from 1972 to 1976. The next five years saw
an almost exponential growth in the number of such articles, to 43 in 1981,
with continued though more linear growth over the next five years, to 83 in
1986.

The burgeoning literature has not, however, produced a clear definition of
social support. Rather, social support and related terms such as social
networks and social integration are used often interchangeably as general
rubrics for a broad range of phenomena, generally dealing with consequences
of social relationships for individual health and well-being. Throughout this
chapter, we use the generic label of social relationships as an umbrella term
for these various contracts (i.e. social support, social integration, and social
networks) which we will define and distinguish later in this chapter.

The recent literature on social support is clearly related theoretically and
empirically to longstanding sociological literatures on social integration and
isolation. Yet the major contributors in the recently burgeoning literature on
social support have been psychosocially oriented health scientists, with the
literature dominated numerically by articles from the health sciences and,
increasingly, psychology. However, sociologists have an important role to
play if the study of this inherently sociological phenomenon is to advance
beyond its current state.

RECENT LITERATURE ON SOCIAL SUPPORT

Recent scientific interest in social support derives largely from lectures by two
distinguished physician epidemiologists with strong psychosocial interests
to the American Public Health Association and Sidney Cobb's (1976) Presi-
dential Address to the Psychosomatic Society. Cassel and Cobb each re-
viewed extant studies to demonstrate the centrality of social relationships and
supports to the maintenance of health, emphasizing their potential to moderate
or buffer potentially deleterious health effects of psychosocial stress and
perhaps of other health hazards (also see Caplan 1974 and Caplan & Killilea
1976). Their papers stimulated new research on the impact of social rela-
tionships on all aspects of health as well as subsequent reviews of relevant
studies conducted both before and after 1976. (See Berkman 1985, Broadhead
& McLeod 1985, and Turner 1983 for some of the better and more recent
reviews, and Israel & Rounds 1987 for a review of reviews). This new
research and the rediscovery of the relevance of other pre-1976 work to
current concerns have sharpened our understanding of how, when, and why
social relationships and supports do and do not affect health; they have also
defined new issues for future investigation.
The last decade of work on social relationships and health has focused heavily on two issues: (a) whether the quantity and quality of social relationships are causally related to health; and (b) whether social relationships benefit health principally via buffering (also termed moderating or interactive) effects on the relationship between stress and health or via main (or additive) effects on health. Cassel (1976), Cobb (1976), and Caplan (1974) all emphasize that much or most of the beneficial health effects of social relationships are due to their buffering properties in the presence of stress, hence the label social support, and some (Kaplan et al 1977:49) even assert that “social supports are likely to be protective [of health] only in the presence of stressful circumstances.” Thus, much of the subsequent literature focused on the issue of buffering vs main effects. Literature reviews by the first author and others (e.g. House 1981, House & Kahn 1985, Cohen & Wills 1985) reveal that, while neither type of support effect is found uniformly, few if any studies fail to find evidence for either main or buffering effects of social relationships on health. Thus, it now seems that the more appropriate research question is not whether both effects exist, but when, how, and why each occurs. At this point, we would hypothesize that buffering effects are most often found when there is a strong stressor to which people with varying degrees of involvement in social relationships are exposed, or when the measure of social relationships is phrased in terms of buffering (e.g. “How much are people helpful in times of stress?”). Reviews of nonexperimental studies by Cohen & Wills (1985) and Kessler & McLeod (1985) find evidence of buffering effects primarily in studies using measures of perceived availability of support in times of need or stress. Measures of the existence of social relationships more often produce only main effects, although being married considered by itself produces buffering effects in three of four studies reviewed by Cohen & Wills (1985:Table 1). Retrospective measures of the actual provision of support in the face of stress show mixed relationships with health and well-being, probably because they are confounded with the severity of stress. Longitudinal studies, with appropriate controls for stress levels, should find clearer evidence of beneficial effects of supportive behavior in the

1See House (1981:30–40 and Appendix A), Finney et al (1984), and Wheaton (1985) for discussions of the conceptual and methodological issues in the distinction between buffering and main effects, and Cohen & Wills (1985), House (1981:Ch. 3), and Kessler & McLeod (1985) for evaluations of the evidence. We would argue that buffering effects are difficult to detect in the type of study typical in the existing literature—cross-sectional, nonexperimental surveys (see House 1981:Appendix B). Buffering effects may be absorbed into main effects in such studies, but experimental studies of animals and humans consistently find evidence of buffering effects. Thus, the existing literature probably provides a conservative estimate of the actual prevalence of buffering effects.
face of stress. The relevance of the type of support or relationship to the problem or stress may also determine the likelihood of observing a buffering effect (Cohen & Wills 1985).

Some have argued that the apparent buffering and even main effects of social relationships on health are actually spurious methodological artifacts, due to the confounding of measures or the existence of an underlying factor (e.g. personal attributes such as social skills or personal competence) which determines levels both of health and of social relationships or support (e.g. Gore 1981, Heller 1979, Thoits 1982). While these arguments merit careful consideration, evidence discussed below suggests that they cannot explain away the repeatedly observed associations between social relationships and health.

Twice in the past decade the first author has reviewed all articles in the Social Science Citation Index with the term “social support” in their titles. Our basic assessment of that literature, stated at several points (House 1981, 1986, 1987), remains essentially unaltered:

Evidence that social support can reduce morbidity and mortality, lessen exposure to psychosocial stress and perhaps other health hazards, and buffer the impact of stress on health is now available from diverse types of studies: laboratory experimental studies of animals as well as humans, cross-sectional and retrospective field studies of human populations, and growing numbers of longitudinal or prospective field studies as well. Although the results of individual studies are usually open to alternative interpretations, the patterns of results across the full range of studies strongly suggests that what are variously termed social relationships, social networks, and social support have important causal effects on health, exposure to stress, and the relationship between stress and health (House 1987:136).

Of all the evidence, the most equivocal is the evidence that social relationships have beneficial effects on morbidity. There are two possible explanations for this equivocation. (a) Studies of morbidity generally focus on a particular disease while studies of mortality suggest that the effects of social ties are more general in character. (b) The genesis and progression of diseases follow different temporal pathways, but studies of morbidity generally fail to take temporal factors into consideration.

Recent prospective studies of mortality in community populations have been especially compelling in demonstrating the power of social relationships as determinants of health and in identifying important directions for future research. Although sociologists and epidemiologists beginning with Durkheim (1897/1951) have recognized that mortality and morbidity are significantly higher among the more socially isolated than among the more socially integrated, especially the unmarried vs the married (e.g. Carter & Glick 1970, Kitigawa & Hauser 1973, Gove 1972, 1973), the causal direction of these associations and the processes or mechanisms underlying them have remained
ambiguous. The recent prospective mortality studies have markedly reduced such ambiguities. The prospective design of the mortality studies, the strikingly consistent findings, and the ability of these studies to highlight important areas for future research on social relationships and health lead us to focus in greater detail on these studies of social relationships and mortality.

**Prospective Studies of Community Populations**

In the first major prospective study on social relationships and mortality, Berkman & Syme (1979) reported data from a probability sample of 2229 men and 2496 women, who were aged 30–69 when interviewed in 1965 in Alameda County, California. The data included measures of the presence or absence of four types of social ties in 1965—marriage, contacts with extended family and friends, church membership, and other formal and informal group affiliations. Each of these four types of social relationships predicted the rate of mortality over the succeeding nine years. Each effect was independent of the others, and the more intimate ties of marriage and contact with family and friends were stronger predictors of mortality rates than were church and group membership. An overall "Social Network" Index, which weighted the intimate ties more heavily, remained a significant predictor of mortality (with a relative risk ratio of about 2.0 for persons low vs high on the Social Network Index) in multivariate analyses, which controlled for self-reports in 1965, of physical health status, socioeconomic status, cigarette smoking, alcohol consumption, level of physical activity, obesity, race, life satisfaction, and use of preventive health services.

House et al (1982) replicated and extended the Alameda County results in a study of 1322 men and 1432 women who were aged 35–69 at the time of their initial interview and physical examination in 1967–1969. This study was part of the Tecumseh (Michigan) Community Health Study. These data included three major classes of social relationships and activities—(a) intimate social relationships (e.g. marital status, visits with friends and relatives), (b) formal organizational involvements outside of work (e.g. attending church), and (c) active leisure pursuits involving social contact (e.g. attending classes or spectator events such as movies and sporting events). Composite indexes of these relationships and activities (as well as a number of individual components) were inversely related to mortality over the succeeding 10–12 year follow-up period, net of the effects of age and a wide range of biomedically assessed (e.g. levels of blood pressure, cholesterol, and respiratory function and electrocardiograms) as well as self-reported risk factors of mortality. These relationships were generally stronger in Tecumseh among men than among women, and they were generally weakened more among women than among men by controls for age and other risk factors for mortality. Adjusted for all risk factors, the relative risk ratios of death among
persons with low levels of social relationships and activities (relative to those with high levels) were about 2.0–3.0 among men and 1.5–2.0 among women.

Blazer (1982) reported similar results for a broader set of measures of social relationships and supports in an older and smaller cohort of 331 men and women in Durham County, North Carolina, who were aged 65 and over at the beginning of the 30-month study period. Again, baseline indexes of three types of social relationships and support—(a) roles and attachments available, (b) frequency of interactions with friends and relatives, and (c) perception of social support—were each inversely associated with mortality (again with the proportion dying among persons with low levels of social relationships two to three times the proportion among persons with high levels) over the succeeding 30 months, net of ten self-reported baseline risk factors of mortality.

Schoenbach et al (1986) provided yet another replication and extension of the preceding results in their analyses of 2059 older adults (mean age = 54) in the Evans County (Georgia) Cardiovascular Epidemiologic Study. Data from medical examinations and sociologic interviews taken in 1967–1969 were used to predict mortality and survival experience through May 31, 1980. Using items and indexes similar to those of Berkman & Syme (1979), Schoenbach et al (1986) found a social network index similar to that of Berkman Syme significantly predictive of mortality/survival in a proportional hazards model net of age and major biomedical as well as self-reported risk factors of mortality. The Evans County results were weaker than those in Tecumseh and Alameda County, though in Tecumseh the relative risks were greater for males than females, especially among whites.

The basic pattern of the results of these American studies has been replicated in three Swedish studies. In 1973 Tibblin, Welin and associates (Tibblin et al 1986, Welin et al 1985) first studied two cohorts of men, one born in 1913 and the other in 1923, living in Gothenberg, Sweden’s second largest city. In both cohorts, subsequent mortality through 1982 was inversely related to the number of persons in the household and the men’s level of social and outside home activities at the time of the 1973 baseline interviews and examinations. These effects remained significant net of age and baseline levels of systolic blood pressure and serum cholesterol, smoking habits, and perceived health status.

Orth-Gomer et al (1986) analyzed the mortality experience through 1981 of a random sample of 17,433 Swedish men and women, aged 29–74 at the time of their interview, in the 1976 or 1977 Swedish Surveys of Living Conditions. An 18-item index of frequency of contact with family, friends, neighbors, and coworkers was significantly predictive of subsequent mortality net of age, sex, education, employment status, immigrant status, physical exercise, smoking, and health status as indexed by reports of chronic conditions. Orth-Gomer et al (1986) also reported results of a prospective study of
survival in a combined group of 50 men (aged 40–65) with ischemic heart disease (IHD), 50 with elevated IHD risk factors, and 50 normal controls. Social activities were again significantly predictive of survival over the next eight years, with the most isolated men especially at risk. Ruberman et al (1984) report similar results for a group of American survivors of myocardial infarction.

Overview of Results of Prospective Studies

The consistency and strength of the results in these prospective studies, and the literally life or death nature of the outcome, suggest that social relationships are very consequential for health. In contrast to the causal ambiguity of earlier research, the prospective designs of these studies and their extensive controls for potentially confounding psychosocial and biomedical variables make it almost certain that social relationships have a causal impact on health. The crude nature of the measures of social relationships, however, leaves indeterminate what aspects, structures, or processes of social relationships are most consequential for health. Yet the consistent patterns in the results across studies are suggestive in these regards.

First, all of the prospective studies reviewed here find that the physical health impact of social relationships is quite nonspecific. The principal dependent variable in all studies is mortality from all causes, and no study finds significant variation in the effect of social relationships across different causes of death. Given broad evidence of mental health effects of social relationships and supports as well, future attempts to explain how and why social relationships and supports affect health must account for the apparent nonspecificity of outcome.

Second, the association of social relationships with mortality tends to be curvilinear, especially for men in smaller communities. Very low levels of social relationships, suggesting social isolation, appear to be particularly deleterious to health, while variations in levels of social relationships and supports above a moderate threshold are less consequential (see Blazer 1982; Orth-Gomer et al 1986).

Third, the strength and nature of the effect of social relationships on mortality varies across the communities and populations studied. The results are strongest and most linear for men and women in urban communities (i.e. Alameda County, California, and Gothenberg, Sweden). In less urban settings (e.g. Tecumseh, Michigan, and Evans County, Georgia), the results become weaker for women and more nonlinear for men. Social relationships may be more prevalent and pervasive in smaller communities, especially for women who may experience meaningful social interactions in the course of such daily activities as shopping or childcare (at least at the time these studies were done in the 1960s and early 1970s). Thus, measures of social rela-
tionships and supports in smaller communities may have less variance, especially in the critical lower ranges and for women. Hypotheses such as this as well as the effect of between-community variations in mean levels of social involvement, can only be tested in broader regional or national studies—an issue to which we return toward the end of this chapter in discussing the determinants of social relationships.

Finally, the impact of social relationships on mortality in these studies is generally stronger among men than among women, with the possible exception of the Alameda County data. This pattern of results is consistent with other evidence that being married is more beneficial to health, and becoming widowed more detrimental, for men than for women (Gove 1972, 1973, Helsing & Szklo 1981). On the other hand, women seem to benefit as much or more than men from relationships with friends and relatives that tend to run along same-sex lines. Thus, both men and women seem to benefit more from relationships with women than relationships with men. This hypothesis is consistent with evidence that among both male and female college students, time spent interacting with women is inversely related to loneliness, while time spent interacting with men is unrelated to loneliness (Wheeler et al 1983). If relationships with women are more supportive or healthful, there may be costs, in terms of mental health, for example, to women of providing such support (Belle 1982; Kessler & McLeod 1985). We return also to these issues in discussing the determinants of social relationships of support.

In sum, existing research, most notably a growing number of prospective mortality studies in general populations, suggests that social relationships have effects on mortality, and perhaps morbidity, which rival those of most other known biomedical and psychosocial risk factors. Due generally to a lack of appropriate measures of stress and stress-responsive aspects of support, the prospective mortality studies have estimated only additive effects of social relationships. However, a variety of other studies not reviewed in detail here—including retrospective cross-sectional and short-term longitudinal studies of human populations, and experimental studies of animals as well as humans—suggest that social relationships also buffer the deleterious health effects of psychosocial stress and other health hazards.

Unresolved Issues and Future Directions

After its first decade of intensive activity, the study of social relationships in relation to health shows great promise. Even the relatively crude state of conceptual and theoretical formulations and empirical research is a source of optimism for the future in two senses. First, if relatively crude theory and research have produced rather impressive results, attempts to specify, refine, and broaden future theory and research are likely to have real payoff. Second, a broad range of important and interesting problems remains to be analyzed in
the next decades. The problems are psychological and biological as well as sociological (see Cohen & Syme 1985), but this chapter focuses on three issues of particular relevance to sociology. The study of social relationships and support currently needs greater sociological input to complement the psychological and biological orientations of the majority of contributors to this literature.

First, we need to better understand the structure of social relationships. Terms such as social support, social networks, social integration or isolation, and social relationships have been used interchangeably in theoretical discussions and have been applied to virtually identical empirical phenomena and measures. Only if we specify the real and important distinctions among these concepts will we be able to delineate what aspects of social relationships have what kind of effects under what conditions, or how these different aspects of social relationships are themselves interrelated.

Second, we need to understand the biopsychosocial processes through which social relationships come to affect health. This chapter focuses on the social processes that mediate and explain the impact of social relationships or support on health. These processes have been relatively neglected in a heavily biomedical and psychological literature.

Third, the literature of the last decade has considered social support (and, similarly, social networks or social integration) almost exclusively as an independent, mediating or moderating variable. For both scientific and practical or policy reasons, social support, social networks, and social integration must also increasingly be viewed as dependent variables. Psychological and biomedical scientists have increasingly argued that psychological and perhaps even biological factors may be the underlying causes of structures and processes of social relationships. From the perspective of sociology and social epidemiology, we argue that social relationships and supports are independent causes or determinants of health, and that more attention must be paid to the macrosocial structures and processes that give rise to these more microsocial relationships and supports.

STRUCTURES OF SOCIAL RELATIONSHIPS AND SUPPORT

The study of social support has mushroomed over the last decade without consensus on a theoretical or empirical definition of social support. The prospective studies just reviewed have used the terms "social network," "social relationships," "social support," "social ties," and "social activity" to refer to essentially the same phenomena—the existence, number, and frequency of social relationships. Despite the frequent use of the term social network, none of these studies measures any of the structural characteristics—other than perhaps size and frequency of contact—that are the hallmark of
social network analysis (e.g. density, reciprocity, multiplexity, etc). Similarly, only one study (Blazer 1982) measures what is usually meant by support (i.e. the perceived quality of social relationships), and even in this study the majority of measures of social relationships assess only their existence or the frequency of interaction.

Future work must first distinguish theoretically and empirically among the following three general classes of phenomena or variables, each with multiple components or indicators, and must then delineate the causal relationships among these variables and their antecedents and consequences:

1. Social integration/isolation refers to the existence or quantity of social ties or relationships, which may in turn be distinguished as to type (e.g. marital, kin/nonkin) and frequency of contact. A person’s degree of social integration/isolation is a function only of the number of relationships s/he has with other people or the frequency of interaction with those people. It says nothing about the structure of those relationships or their functional content.

2. Social network structure refers to the structure which characterizes a set of relationships. These structural properties may be either dyadic (characterizing the relationship between the focal person and another person, i.e. reciprocity, multiplexity, durability) or network variables (characterizing the relationships among the focal person and two or more others, i.e. density, homogeneity, multiplexity, or dispersion). Size and frequency of contact, often considered social network variables, are subsumed under our definition of social integration (see Hall & Wellman 1985 for a similar analysis).

3. Relational content refers to the functional nature or quality of social relationships, which may be distinguished in terms of source (e.g. spouse, friend, coworker, etc.). Social support is one of the important contents or qualities of such relationships. Two other important forms of relational content are relational demands and conflicts and social regulation or control. Support refers to the positive, potentially health promoting or stress-buffering, aspects of relationships such as instrumental aid, emotional caring or concern, and information. In essence, supportive relationships directly provide something that people need to stay healthy or to adapt to stress. Relational demands and conflicts refer to the negative or conflictive aspects of relationships that may be deleterious to health. Social regulation or control refers to the controlling or regulating quality of social relationships which, depending on the behaviors controlled or regulated, may be either health promoting or health damaging.

These concepts and a set of potential causal relationships among them and other variables are shown in Box C of Figure 1. Much of the literature on “social networks” or “supports,” including the prospective mortality studies just reviewed, merely documents the impact of social integration on stress and/or health. It is often assumed or implied that people with more rela-
A. POTENTIAL EXOGENOUS DETERMINANTS
1. Biological
2. Psychological
3. Macrosocial

C. MICROSOCIAL RELATIONSHIPS
Social Integration/Isolation
   Relational Content
   1. Social Support
   2. Social Regulation
   3. Social Conflict

Social Network Structure

D. MICROBIOPSYCHOSOCIAL MEDIATING MECHANISMS
1. Biological
2. Psychological
3. Behavioral

B. CHRONIC/ACUTE PSYCHOSOCIAL STRESS

E. HEALTH
(physical & mental)

Figure 1  A framework for research on structures and processes of social relationships in relation to health. (NB: Darker arrows indicate causal relationships of primary focus in this chapter. We have omitted possible reciprocal effects for clarity of presentation.) The bid pathway illustrates main effects as mediated by biopsychosocial mechanisms; in the absence of such mediation, the e pathway represents main effects. Similarly, the b/c pathway illustrates buffering effects as mediated by biopsychosocial mechanisms; in the absence of such mediation, the a pathway represents buffering effects.
tionships or more frequent interactions are healthier and live longer because of the network structure and/or social content, usually social support, of these relationships. But there is usually no direct evidence for these assumptions, and increasingly there is reason to question them. Blazer (1982), for example, finds that perceived support mediates only part of the impact of the number and frequency of social relationships on mortality. House et al (under review) and House et al (1982) both find measures of social integration more consequential for health than are measures of the quality of relationships, though these results may be due to special methodological characteristics of these studies. Nevertheless, all three studies indicate the need to distinguish between social integration and support both conceptually and empirically.

Aside from minimal levels of network size or interaction frequency, no characteristics of social networks are necessarily implied in measures of social integration; and despite the many studies using the term “social networks” (e.g. Berkman & Syme 1979), relatively few actually measure structural network properties. In reviewing those that do, Israel (1982) concluded that, except for network size, “quantitative structural and interactional characteristics of networks have been found to have conflicting associations with well-being.” Nevertheless, density, reciprocity, sex composition, and perhaps homogeneity seem to be the most promising network structure variables for future work. Networks of small size, strong ties, high density, high homogeneity, and low dispersion appear to be helpful in maintaining social identity and hence health and well-being outcomes when these are promoted by identity maintenance. However, change in social roles and identities, and hence health and well-being during such change, is facilitated by larger networks with weaker ties, lower density, and greater social and cultural heterogeneity (Hirsch 1980, 1981; Phillips 1981; Stokes 1985; Stokes & Levin 1986; Walker et al 1977). Reciprocal relationships also appear to be more health promotive than relationships characterized by an uneven exchange (Gallo 1982). Finally, evidence from the prospective studies reviewed above and other studies suggests the importance of the sex composition of social networks, since women appear to give and receive more support, with benefits to others and costs as well as benefits to themselves (Belle 1982, Burda et al 1984, Hays & Oxley 1986, Kessler & McLeod 1984, Reis et al 1985, Sarason et al 1985).

In sum, future research needs to distinguish conceptually and to measure empirically two structures of social relationships—(a) social integration, and (b) social network structure. As indicated in Figure 1, integration or the existence and quantity of relationships is causally prior to their formal structure. Empirical analysis should elucidate how much of the impact of integration on mortality, health, and well-being is mediated through particular characteristics of network structure (versus being direct or mediated by other
variables), and whether, when, and to what extent network structure variables have effects that are other than spurious products of their association with social integration.

FROM STRUCTURES TO PROCESSES OF SOCIAL RELATIONSHIPS AND SUPPORT

Social Processes of Support, Conflict, and Regulation

Future research must also determine the extent to which the effects of social integration and social networks are mediated through the social or relational content of these relationships, including, of course, various sources and perhaps types of social support. In addition to social support, two other aspects of the functional content of social relationships merit increasing attention—relational demands and social conflicts, and social regulation or control. Many have argued that concern with the positive or health promoting aspects of social relationships should not preclude recognition of their negative or health damaging effects (e.g. Antonucci 1985, Rook 1984, Wortman 1984). Empirical research increasingly suggests that positive and negative content can inhere in relationships with either a given individual (e.g. a parent) or a class of persons (friends and relatives) and that negative content may be more consequential for health (Rook 1984, Fiore et al 1983, House & Landis, in preparation).

Attention is also increasingly directed to the ways in which social integration and social networks may control or regulate individuals’ behaviors or their thoughts and feelings in ways that generally promote health. Durkheim’s classic conception of social integration posited that social relationships such as marriage, parenthood, religious involvement, and employment promote health (e.g. reduce suicide) by providing a sense of meaning and purpose in life and by creating a set of constraints or controls on individual behavior. No one has explicitly investigated the relationships of a stable sense of meaning or purpose to either social integration or mortality, though a stable sense of meaning and purpose is one possible explanation of the frequently reported association of church attendance with lower morbidity and mortality (Kaplan 1976, House et al 1982, Berkman & Syme 1979).

Umberson (1987) posits both indirect and direct forms of social control of health behaviors. Indirect social control occurs through self-regulated conformity to social norms due, for example, to a sense of responsibility for others. Direct social control occurs as a result of others facilitating or directly imposing health-promoting behavior (e.g. controlling the type or amount of food available to an individual), or their regulating or sanctioning health-damaging behavior such as smoking or excessive drinking.
The social regulation perspective overlaps with some conceptions of social support but differs in the underlying operative mechanism. The support perspective is generally considered to include the provision of instrumental aid, information, or emotional sustenance to an individual, with the primary emphasis on emotional support (House 1981, Cohen & Wills 1985). A social regulation perspective focuses on the constraint of an individual’s behavior by another individual or societal proscription. Both regulation and support may facilitate or directly promote health; however, support may be more responsible than regulation for the reduction of stress and adaptation to stress. Evidence suggests that social integration is associated with healthier behaviors and life styles, and that these behaviors and life styles explain part of the association of social integration with health (Berkman & Breslow 1983). The actual role of social regulation or control in these associations remains to be demonstrated.

In sum, on closer examination the study of what has been loosely termed social support in relation to health subsumes the study of two different structures of social relationships (integration/isolation and network structure), and three social processes (social regulation or control, relational demands and conflicts, and social support). Figure 1 presents an initial causal model for studying the relations among these structures and processes and their connection to health. Once relational demands and conflicts, social regulation, and social support begin to be studied in relation to each other, further refinements of the causal order among them may become possible and necessary.

**Biopsychosocial Mechanisms**

The processes and mechanisms linking social relationships to health are behavioral, psychological, and biological, as well as social. Consistent with the sociological focus of this chapter, we have emphasized the three social processes of support, control or regulation, and demands and conflicts. These social processes must be understood, however, in relation to the behavioral, psychological, and biological mechanisms which may either link these social processes to health or constitute alternative pathways through which social relationships affect health. Available space and empirical evidence allow only speculative consideration of these biological, psychological, and behavioral mechanisms.

**BUFFERING VS MAIN EFFECTS**  The much debated issue of whether social relationships provide buffering or constitute main effects represents a first crude approach to the identification of mechanisms through which social relationships affect health. This debate says little about the actual biopsychosocial processes through which the health effects of social relationships occur, but rather asks whether these processes operate at all times (main
effects) or only when an organism confronts stress or other health hazards (buffering effects). Quantitative or qualitative differences in biopsychosocial processes are implied by this distinction but are seldom made explicit. If the same mechanisms account for both buffering and main effects, they must operate more intensively in the presence of stress or other health hazards. For example, the presence of others or their emotional support may have a calming influence on the neuroendocrine system of organisms thus promoting health generally, but this effect may be more manifest or intense when organisms are aroused or under stress. Alternatively, there may be qualitatively different mechanisms that explain buffering and main effects. For example, social relationships and supports may facilitate psychological and behavioral processes of coping and adaptation in the face of stress (buffering mechanisms) and may also meet a basic human need for relationships/attachment (a main effect). Social relationships, networks, and supports may have main or buffering effects through a variety of mechanisms, as indicated in Figure 1.

**BIOLOGICAL MECHANISMS** Ultimately the impact of social and psychological variables on physical health, and to some extent on psychological health, are transmitted through biological mechanisms. Ethological and sociobiological theories and evidence suggest that human and other species may be genetically programmed to seek social interaction and form social relationships, perhaps to enhance species survival (Mendoza 1984:7; see also Bowl by 1973). A variety of studies of animals and humans suggest that the mere presence of, and especially affectionate physical contact with, another similar or nonthreatening organism can markedly reduce cardiovascular and other forms of physiological reactivity (see Lynch 1979; Chs. 4–6; House 1981: Ch. 3). The drive for sociability may have the individual consequence of increasing arousal when social relationships are threatened and reducing arousal (even in the presence of stress) when these relationships are intact.

**PSYCHOLOGICAL MECHANISMS** Related to the biological mechanisms, but partially independent of them, are psychological mechanisms through which social relationships may affect health. One possibility is that these mechanisms may be affective in nature, e.g. if there is a basic human need for relationships or attachments, people will feel better psychologically when that need is fulfilled, with attendant physiological consequences. Social relationships may also alter the perception or cognition of the world in general, or of potentially stressful events and situations in particular. Antonovsky (1979) has discussed the importance of “coherence,” analogous to Durkheim’s sense of meaning and purpose, which may be promoted at least in part by social relationships; and Totman (1979) suggests that psychological health and
physical health depend on purposeful social interaction to support and reaf-
firm the consistency of the individual’s values and assumptions about the
world (Antonovsky 1987). Lazarus and colleagues (Lazarus 1966; Lazarus et
al 1974) have emphasized the importance of cognitive appraisal in the process
linking potential social stressors to health, and the role of social relationships
in moderating such appraisals.

BEHAVIORAL MECHANISMS Finally, social relationships may facilitate or
promote individual or collective behaviors that are generally promotive of
health (e.g. adherence to medical regimens or traditional health behaviors
such as nonsmoking, adequate sleep, and prudent and moderate diet and
drinking behavior) or are protective of health in the face of stress or other
health hazards (e.g. exercise, adaptive coping behavior, protective health
behaviors such as wearing protective equipment, or adhering to periodic
health examination and monitoring regimens for people at-risk). Berkman &
Breslow (1983) find that social relationships promote health behaviors, and
many have argued that adaptive coping behavior is a major mechanism
linking social support to health (coping and social relationships have, howev-
er, rarely been studied together empirically—cf. Billings & Moos 1981 for an
exception).

In sum, we know little at this point about the biological, psychological, or
behavioral mechanisms through which structures of social integration or
social networks, and processes of social support, conflict, or regulation come
to affect health. Only studies which simultaneously assess and study the
interrelationships among multiple social, psychological, behavioral, and
biological processes and mechanisms can advance our understanding of these
issues.

Structures and Processes Determining Social Support

Over the past decade, researchers and theorists have extensively studied social
relationships as independent, intervening and moderating variables that may
affect psychosocial stress or health or the relations between stress and health.
Yet almost no attention has been paid to social integration, networks, or
supports as dependent variables. The determinants of these, as well as their
consequences, are crucial to understanding the theoretical and causal status of
social relationships in relation to health. If there are exogenous biological,
psychological, or social variables (Box A of Figure 1) that determine both
health and the nature of social relationships, then the observed relationships of
social relationships to health may be totally or partially spurious. More
practically, Cassel, Cobb, Caplan and others became interested in social
support as a potential lever for improving health. To actualize this potential
requires knowledge of the more macrosocial as well as the psychological or biological structures and processes that determine the nature and level of social relationships and their structure and content.

**Psychological and Biological Determinants**

Interest in the psychological and biological determinants of social integration, networks, and supports has stemmed largely from efforts to show that the association between social relationships and health is a spurious product of causally prior biomedical or psychological variables. For example, biomedically or psychologically healthy or competent people are assumed to be better able to establish and maintain supportive social relationships and networks. Thus, it is competence or preexisting dispositions toward health that cause people to have both more and better social relationships and, also, better health.

Although such arguments are appealing and difficult to refute fully even with prospective nonexperimental data, relatively little empirical evidence has been adduced in support of them, and much available evidence is inconsistent with them. The prospective mortality studies described above repeatedly find that controls for physical health status cannot explain away the predictive impact of social integration on health. Social integration and support similarly predict subsequent mental health net of initial mental health in a number of longitudinal studies (Billings & Moos 1982; Kaplan et al 1987; Lin & Ensel 1984; Pearlin et al 1981). The evidence from longitudinal or incidence studies of physical, especially cardiovascular morbidity, are somewhat more mixed (see Berkman 1985). On balance, however, the majority of longitudinal studies have failed to identify biomedical variables that can explain away the prospective association of social relationships with health and longevity.

A number of psychologists have argued that the perception of social relationships and their structure and content may be due more to dispositional characteristics of the person than to the actual nature of the social environment (e.g. Hansson et al 1984, Heller 1979, Sarason et al 1986). It is highly plausible that various skills and dispositions of individuals affect their ability to establish and maintain social relationships, thus affecting the levels of social relationships they experience (House 1981:Ch.5). There is little reason, however, to believe that dispositional characteristics of persons can account for all or most of the effects of social integration or support on health. Most existing research is cross-sectional and hence not well-suited to determining the causal relationships among dispositional competence, social relationships and health. Psychologists tend to assume that personality dispositions must be causally prior to current social circumstances, but this assumption is unfounded (Kohn & Schooler 1983). If personality were causally prior to current social relationships and explained their impact on health, then controlling for
personality measures should eliminate the association between social relationships and health in cross-sectional or prospective studies. Although too few studies have simultaneously assessed personality and social relationship variables in relation to health, those that have done so have found that the associations of social relationships with health generally persist even with controls for personality (e.g. Cohen et al 1986; Holahan & Moos 1981, Kessler & Essex 1979; Schulz & Decker 1985).

**Macrosocial Determinants of Integration and Support**

Determinants of social relationship structures and processes occur on multiple levels—biological, psychological, and social. Previous literature on social relationships has focused primarily on the more microsocial or psychological level, largely ignoring the existence of important macrosocial determinants of levels and content of social relationships. At least since the time of Durkheim, sociologists have been interested not only in the consequences of social involvement for individuals and society, but also in the social determinants of levels of social involvement experienced by individuals and society. This is an area in which sociologists have a unique contribution to make to a literature that has failed to think theoretically about such issues or to address them empirically.

Most research on social relationships has been limited to members of particular organizations (e.g. college students, workers), communities, or groups experiencing specific stress and health problems. Studies with extensive measures of social integration, networks, or supports generally have little or no variation on their potential macrosocial determinants, while studies on more heterogeneous community or national samples generally contain very limited measures of social integration, networks, or relational content. Thus, while there is a substantial theoretical base in sociology suggesting that macrosocial features influence social relationships, there is little empirical evidence to substantiate the nature of that influence.

The impact of macrosocial structures on structures and processes of social integration and support can be illuminated, however, by several kinds of research. First, we can examine how structures and processes of social relationships vary across groups of individuals in different structural positions or locations in society—for example, men vs women, lower vs upper socio-economic groups, younger vs older persons, etc. Second, we can examine variations in structures and processes of social relationships across different organizational units of societies such as different communities or formal organizations. Finally, we can examine variation in structures and processes of social relationships as a function of planned or unplanned changes in macrosocial structures of society.
SOCIAL STRUCTURAL POSITIONS OF INDIVIDUALS  

Attributes of individuals such as sex, age, race/ethnicity, and socioeconomic status are associated with differential exposure to structural barriers and opportunities in society which may, in turn, shape social relationship structures and processes. The individual attribute for which the most relationship research evidence is available at present is gender.

As noted in our earlier discussion of prospective mortality studies, a variety of evidence suggests that women are more effective providers of support than are men, with attendant psychological costs to women. The higher levels of support provided by women partly reflect structural features of the social environment (e.g. the division of labor at home) and the corresponding societal expectations for women, which have been more likely to place women in the position of support provider. Women are substantially more likely than men to provide support to family and friends, to shoulder primary responsibility for childcare, to care for aging parents, and to have jobs (e.g. nursing) which involve providing support to others (Brody 1981, Kessler & McLeod 1984, Spitze 1986, Stoller 1983). While psychologists might attribute these care providing behaviors to individual propensities, there is evidence that social factors also influence their occurrence. Risman (1987), for example, suggests that microstructural factors, specifically, being the primary childcare provider in a family, influence an individual’s (male or female) propensity to provide supportive behavior.

Macrosocial structures and processes may be exacerbating this burden on female providers. For decades women have been entering the labor force at an increasing rate in response to a number of macrosocial forces, including economic necessity, labor force demands, and policies and laws which reduce some barriers to female entry into the labor market. Working women, however, remain primarily responsible for both childcare and housework (Spitze 1986). Social arrangements to reduce the personal and economic hardship of care provision for working and single mothers have not developed in correspondence with need. Ross & Mirowsky (1987) report that the existence and ease of childcare arrangements significantly reduce levels of depression among working mothers. This research suggests the importance of considering more macrosocial determinants of social relationships and attendant policy applications.

Other social statuses that warrant particular research attention are socioeco-

---

2The available evidence indicates that the physical health of women (as indicated by mortality rates) is not as adversely affected by lack of social relationships as that of men; however, the benefits are more clear for men than for women. Evidence on psychological well-being indicates that women may experience more psychological distress than men as a consequence of social involvement (e.g. Kessler & McLeod 1984, Bell 1982).
nomic status, race/ethnicity, and age. Surveys of national and regional populations by Veroff, Douvan & Kulka (1981:Ch. 9) and Fischer (1982:Ch. 19) find that respondents with higher levels of education and income generally have larger networks, more organizational involvements, and more frequent contact with network members. These studies are consistent with others that find a higher rate of divorce and lower levels of organizational involvement and church attendance among individuals of lower socioeconomic status (Dohrenwend & Dohrenwend 1970; Moody & Gray 1972). Limited data suggest that these individuals may also experience a lower quality of social relationships and find these relationships less useful in coping with stress (Belle 1982; Dohrenwend & Dohrenwend 1970).

Black and minority populations are on average socioeconomically disadvantaged and hence may also be disadvantaged in terms of social relationships and supports. However, more careful research is needed to distinguish the effects of race/ethnicity versus socioeconomic status. Some ethnographic work suggests that minority groups may develop stronger patterns of social networks or supports as a means of adjusting to adversities (e.g. Stack 1974).

COMMUNITY AND ORGANIZATIONAL VARIATION A substantial body of theory and research has long suggested that urban life may be detrimental to the quality and quantity of social relationships (Hall & Wellman 1985). Fischer (1982) found that while total network size does not vary greatly along the urban/rural dimension, the composition of social networks does tend to vary. Rural networks tend to be more dense and kin-based, while less dense urban networks include more nonrelatives. Religious involvement is a more important basis of social integration in rural areas, whereas work plays a similar role in urban areas (cf also Cobb & Kasl 1977).

Our review of prospective mortality studies suggested that social integration and support (and probably certain network structures such as greater density, homogeneity, and perhaps reciprocity) are more prevalent in smaller communities than in larger urban areas. This may explain why measures of social integration are less predictive of mortality within such smaller communities, especially among females. We need research on regional and national populations to examine community differences in structures and processes of social relationships as they affect health.

Variation in the extent, structures, and processes of social relationships can also be observed across organizations. For example, studies of stress and support at work find supervisors and coworkers differentially important as sources of support in different organizations (e.g. LaRocco et al 1980). Again, we simply lack an adequate research base in this area.

Issues related to age are discussed below under macrostructural change.
CHANGES IN MACROSTRUCTURAL FEATURES OF SOCIETY  Planned and unplanned macrosocial changes show powerful effects on structures and processes of social relationships. Marital status, for example, is a key indicator of social integration and strongly linked to health and well-being. The proportion of life spent in the married status was less in 1980 than at any previous time in US history, largely because of a decrease in mortality and an increase in divorce rates (Watkins et al 1987). A number of macrosocial forces contributed to changes in the probability of divorce. Public health, technological, and medical advances contributed to the reduction in mortality, and longer lives increase the length of time in which one may become divorced or widowed. The rising divorce rate has also been spurred by both unplanned social change in the social and economic status of women and quite purposeful changes in divorce laws and policies. For example, Weitzman (1985) argues that changes in divorce laws have encouraged marital dissolution by simplifying the divorce process and by reducing the personal and financial costs of divorce for men.

Lowered fertility coupled with lowered mortality also means that older people will have increasingly fewer children and younger persons to depend on for support in their later years. Watkins et al (1987) demonstrate that the proportion of women with a parent or parents over age 65 tripled between 1900 and 1980. They suggest that the continued increase in demand for support provision to aging parents may depress future fertility rates (thus influencing future levels of social integration on another level).

POLICY ISSUES  Most research on social relationships fails to recognize that levels and content of social involvement are determined by more macrosocial structures and processes, which are subject to purposeful as well as unplanned processes of social change (Durkheim 1951, McRae 1985). Basic demographic trends such as declining fertility and mortality, and hence the "aging" of our population structure, increase the number of dependent older adults while decreasing the number of potentially supportive children (Watkins et al 1987). Growing female labor force participation without the development of substitutes for the care and support roles women have traditionally assumed in families may decrease levels of integration and support while increasing stress loads on women. Changes in divorce laws and in the economy affect levels of marital dissolution. Socioeconomic deprivation and inequality also affect levels of integration and perhaps relational content. All of these macrosocial structures and processes—societal rates of marital for-

4Kiesler (1985), for example, questioned whether any use could be made of Berkman & Syme’s (1979) or House et al’s (1982) results regarding the impact of social relationships and activities on mortality.
mation and dissolution or of fertility and mortality, the age-structure of the population, female labor force participation, and socioeconomic deprivation and inequality—are at least partly influenced by public policy, as are related social changes (e.g. development of other arrangements for caring for children and the elderly) that could mitigate adverse effects for integration or support.

Failure to take account of macrosocial determinants of social relationship structure and content can lead to overemphasis on policies that focus on changing individuals—policies which may incorrectly and unfairly blame the victim and ultimately be ineffective. Gottlieb (1985) and Pilisuk & Minkler (1985) also emphasize that efforts to enhance informal relationships (e.g. family relationships) should not be a substitute for policies which provide formal sources of financial or professional support for disadvantaged populations. Such formal supports may themselves reinforce and strengthen informal supports.

SUMMARY AND CONCLUSION

The burgeoning study of social support in the last decade can be thought of as an extension of the earlier sociological traditions of work on social integration. Biomedical and psychological researchers have, however, been the major initiators and contributors to the recent literature, with a consequent neglect of issues relating to social structure and process. Existing literature has established that the quantity and quality of social relationships are consequential determinants of health and longevity, with a series of prospective mortality studies providing particularly compelling evidence in this regard.

It is much less clear what exactly it is about social relationships that affects health and how these effects occur—these are the key issues for the next decade. We have argued that three aspects of social relationships—(a) their existence and quantity, (b) their formal structure, and (c) their functional content—must be conceptually and empirically distinguished. We have termed these social integration, social networks, and relational content, respectively. The concept of social support is one type of relational content, the others being (a) relational demands and conflicts and (b) social regulation or control. Social integration and networks represent structures of social relationships that affect health, while social support, relational demands, and regulation are social processes through which these structures may have their effects. These social structures and processes, in turn, operate through more microscopic biological, psychological, or behavior processes, producing either main effects, buffering effects, or both. Theoretical specification of causal relationships among these structures and processes of social relationships and empirical tests of such specifications, will enhance both our
scientific understanding and the practical utility of this important body of knowledge of the social determinants of human health and well-being.

A final set of issues requiring increased attention in the next decade concerns the potential biological, psychological, and especially macrosocial determinants of the existence, structure, and content of social relationships as they relate to health. This would represent the reintroduction of old sociological concerns into the more recent, largely biomedical and psychological literature. In sum, we think sociology and sociologists have much to contribute to the study of what we have loosely termed "structures and processes of social relationships and support." This area, in turn, represents one avenue through which sociology can both contribute more directly to scientific and practical advances relevant to human welfare and relate more effectively to psychology and biology, which constitute the other major approaches to understanding human behavior and well-being.

Acknowledgments

Preparation of this chapter was supported by a John Simon Guggenheim Memorial Foundation Fellowship and Grant No. 1-P01-AG05561 from the National Institute on Aging (to the first author); a postdoctoral traineeship (to the second author) from the National Institute of Mental Health (Training Grant No. 5T32MH16806-05) and the National Institute on Aging (Fellowship No. 1-F32-AG05440-01); and a predoctoral traineeship (to the third author) from the National Institute of Mental Health (Training Grant No. 5-T32-MH-16806-06). We are indebted to Niall Bolger, Jean Converse, Sheldon Cohen, Barbara Israel, Kristina Orth Gomer, Leonard Syme, Blake Turner, Barry Wellman, James Wells, and Elaine Wethington for comments on an earlier draft, and to Marie Klatt for her efforts in preparing the manuscript.

Literature Cited


