Considerable literature has documented the psychological and physiological impact of both acute and chronic stressors on individuals. In contrast, only limited research has addressed the impact of stress on family members' health. It seems reasonable to assume that family transitions could have both positive and negative effects on family members. In this chapter, several negative family transitions that may produce adverse physiological and emotional changes in family members and alter family processes are discussed.

We have chosen to discuss two common kinds of transitions and their sequelae that appear to have untoward mental and physical health effects. Caregiving for an ill family member is the first of these, and marital disruption in the form of discord, separation, divorce, or bereavement follows. Although the actual incidence of each form of transition is not known most families will experience at least one of these transitional events.

Our discussion of physiological data will highlight evidence linking familial stressors and the functioning of the immune system, the body's defense against infectious and malignant disease. We suggest that these data provide some insight into possible mechanisms through which family relationships might influence infectious disease morbidity and perhaps mortality. Family process is assumed to change during transitions both as a function of, and a precursor to, changes in immune function. Behavioral immunological literature and family systems theory are combined in discussions of transitional changes. The major emphasis throughout is the link between the stressful nature of transitions and health.

BEHAVIORAL IMMUNOLOGY

It is important to summarize the conceptual framework that underlies the behavioral immunology research discussed in this chapter, since the model provides
the basis for the interpretation and discussion of data. We suggest that an increase in psychological distress, sustained over time, can lead to potentially maladaptive immunological changes. Interactions between the endocrinological and immunological systems provide a physiological pathway through which major and minor life events could lead to an increased incidence of infectious disease; the endocrine system is very responsive to psychological stimuli (Baum, Grunberg, & Singer, 1982), and there are clear endocrinological influences on immunity (O’Dorisio, Wood, & O’Dorisio, 1985).

It is well known, however, that most individuals who undergo major negative life changes do not become ill, or they only experience brief illness episodes. These individual differences in the number of infectious disease episodes are a function of differential exposure to pathogens, as well as the prior health of the individual, especially in regard to immune system function. Thus, across individuals who have equal exposure to an infectious agent like a virus, the probability that they will become ill, as well as the intensity and duration of the illness, is (in part) a product of the status of the individual’s immune system. Presumably, the individuals who are most likely to become ill during stressful periods would be those whose immune system is already compromised to some extent, either by an immunosuppressive disease like AIDS, by a natural process like aging that is associated with impaired immune function, or by longer-term immunological changes that may appear in chronically stressed individuals. These kinds of individuals are more likely to have poorer immunological defenses at the onset of a stressful event, so that smaller stress-associated immunological decrements could have more important consequences.

In summary, while many individuals will show stress-related immunological changes in response to a negative life event, actual physical illness is more likely in individuals who are already vulnerable, either because their immune system is already compromised by a natural process like aging, or (more speculatively) through more chronic stress-related alterations. The model suggests that stress modulates endocrine function which leads to altered immune function and greater vulnerability to illness. Literature is reviewed that establishes the stressful nature of the negative transition and, where possible, the link between the transition and health. Within our model changes in transaction patterns between family members are not an endpoint. Instead, these changes collude to produce chronic arousal leading to decrements in immune function and, potentially, health.

**CAREGIVING FOR FAMILY MEMBERS**

When an individual in a family becomes ill, another family member usually becomes the primary caregiver. If the disease is short-lived, the costs of caregiving are usually limited. However, prolonged illness in a family member may lead to profound changes in interaction patterns, roles, and responsibilities within a family. Moreover, there is evidence suggesting that prolonged caregiving may have adverse physiological and psychological effects. Different facets of the caregiving literature are reviewed, with an emphasis on the association between familial stress and physical and emotional illness.

**Chronically Ill Children**

There are approximately 10 million chronically ill children in the United States (Perrin, 1985). While there are wide differences in parental caregiving related to differences in illness, there are a number of common issues and fears, and most studies describe parental distress related to the illness and/or their caregiving responsibilities. Caregiving within a family presents the dilemma of focusing disproportionate amounts of family resources on a single member while simultaneously maintaining some sense of equilibrium within the family. For children, a primary goal of development is establishing autonomy. The parent-child conflicts that commonly surround the management of diabetes are used to illustrate the difficulties attendant when chronic illness and needs for autonomy collide. Representative studies illustrating the alterations in family process across a variety of chronic illnesses follow.

The existence of considerable fear and worry in parents of chronically ill children has been documented across diseases. For example, Cosper and Erickson (1985) studied 45 mothers of asthmatic children. Three-quarters of mothers reported worrying about their child’s health when separated from their child. Similarly, 60% reported fear of a fatal asthma attack. They found that two-thirds reported intermittent dysphoria and feelings of helplessness related to their child’s illness. No differences were found related to time since onset.

Research exploring familial response to cystic fibrosis has produced similar results. Cystic fibrosis is a potentially fatal genetically transmitted endocrine disorder. The course of the disease varies widely; repeated hospitalizations and a need for daily treatment are common. In research exploring the effect of a child’s cystic fibrosis on the family, Hymovich and Dillon-Baker (1985) found much of the parents’ concern focused on the child’s situation, and 64% of parents reported moderate to considerable concern regarding their child’s future. Additionally, 30% of mothers and 18% of fathers reported chronic fatigue due to caregiving or worry.

King and Hanson (1986) reviewed research on the impact of juvenile rheumatoid arthritis on families. Chronic worry and anxiety about the illness were common findings, as well as some indications of maternal depression. Other work has addressed the effects on nonimpaired siblings; in a well-designed study of psychosocial functioning in children with both severe and mild forms of rheumatic disease, Billings, Moos, Miller, and Gottlieb (1987) found that the siblings of rheumatic disease patients generally functioned as well as the siblings of healthy children; however, the former did report significantly more allergies and asthma. Related work has suggested that cohesive and expressive family
environments are associated with better adaptation among nonimpaired siblings (Daniels, Miller, Billings, & Moos, 1986).

The negative effects of a child's chronic illness also include conflict that may be centered on the management of the illness. Often times normal family conflict engendered by the child's struggle for autonomy with the parent's struggle for control is played out in situations where noncompliance can have life-threatening consequences. Management of diabetes in children serves as a good example, and is characteristically associated with dysphoria and conflict. In a study of mother-daughter interactions and treatment adherence among diabetic adolescents, a common pattern included highly emotional engagement and chronic worry in both mothers and daughters (Bobrow, AvRuskin, & Siller, 1985). Neither mothers or daughters showed much flexibility, and both appeared to use compliance as an arena for attempting coercive control of the other (Bobrow et al., 1985).

The literature on parental caregiving for chronically ill children has supported the stressful nature of caregiving and linked these stressors to alterations in emotional health. However, few published studies have specifically addressed caregiving for a chronically ill child and the parents' or siblings' physical health. One of the ways in which caregiving for chronically ill children may have indirect but significant effects on the family may be through the disruption of family relationships, particularly the marital relationship. Reviewing literature on neurological diseases and the impact on the family, Kerns and Curley (1985) noted that a number of studies have suggested a relationship between marital discord and the presence of a family member with a neurological disease. Later in this chapter we take up the issue of marital discord and its association with poorer emotional and physical health.

Caregiving for a Mentally Ill Family Member

The disruption of family process is not specific to parents caring for medically ill young children. When mental illness occurs in a family it is often associated with major alterations in family life. Mentally ill individuals can display a number of disruptive behaviors, including mood swings, socially inappropriate behavior, paranoia, and apathy. The strains of managing these disruptive behaviors can have significant adverse effects on the family; since 30–50% of mentally ill adults live with their parents (Lefley, 1987), sizable numbers of families are affected.

Parents caring for their mentally ill adult offspring have consistently reported changes in household routine, relationships with friends and relatives, and curtailment of social activities; moreover, the family's focus on the patient may result in neglect of other family members' needs (Lefley, 1987; Smith & Birchwood, 1987). In one study of over 1000 family caregivers, 38% reported their mentally ill relative was assaultive and destructive in their home either sometimes or frequently (Swan & Lavitt, 1986). Parents reported they restricted their own behavior in an attempt to avoid confrontation, and thus their social and recreational activities were concomitantly restricted.

Jacob, Frank, Kupfer, and Carpenter (1987) studied the distress experienced by family members or close friends of individuals who had repeated episodes of major depression. The majority of interviewees reported considerable distress related to the patients' depression, with 43% stating that they personally experienced dysphoric mood as a result. Not surprisingly, individuals living with the patient reported more personal distress than those who lived elsewhere.

In a similar study, Noh and Turner (1987) interviewed 163 spouses and 48 parents who lived with recently discharged patients who had a psychotic diagnosis. They found considerable variability in family members' emotional distress, with the level of caregiver distress showing little relationship to the patients' behavioral problems. A subgroup within the sample was apparent, in which feelings of personal control were low and distress was high; these individuals appeared to be at significantly greater risk for developing psychological problems themselves.

Sainsbury and Grad de Alarcon (1970) studied the effects of community care on the families of elderly psychiatric patients; their sample included multiple psychiatric diagnoses. Using psychiatrists' ratings of the impact of caregiving on family members' physical health, they found substantial negative changes. Similarly, Lefley (1987) used anonymous self-reports to assess family stress and coping strategies in 84 mental health professionals who had a family member with schizophrenia (66%), affective disorder (19%), or an unspecified disorder (16%). Three-quarters of the sample reported emergency contact with treatment service providers, and 73% reported a hospitalization during the most recent year. Family members described the experience as chronically stressful: Psychological problems were reported by 67% of the caregivers, and 72% reported using psychotherapy to assist themselves in coping with their family situation. Similar to the Sainsbury and Grad de Alarcon (1970) data, they noted that 32% of caregivers reported ill health as a consequence of caregiving.

Caregiving for a mentally ill family member differs from caregiving for a chronically ill child in many ways. The nature of the tasks, the caregivers' concerns, and the relationships between caregiver and patient are different. However, extended caregiving in both cases is linked to marital discord, financial concerns, and fears of disease recurrence or progression (Jacob et al., 1987), all factors that could contribute to the observed decrements in emotional health.

Caregiving for a Family Member with Progressive Dementia

In discussing the caregiving literature, we have progressed on a developmental continuum. First parental care of children, then parental care of adult children were reviewed. Now, we come full circle to the case of caregiving in progressive dementia where adult children provide care for aged parents.
The adjustment to aging parents is described as the last developmental task of middle age (Havighurst, 1948). For adult child caregivers this inevitably requires compromises in need satisfaction for both parent and child. Thus, as an adult child works through his or her own aging process he or she is simultaneously faced with the aging process in their parents (Robinson & Thurner, 1979). Privacy and freedom for caregiver and care-receiver are compromised and this loss is a documented stressor (Scharlach, 1987).

The most common progressive dementia is Alzheimer’s Disease (AD). The course of the AD is unpredictable and uncontrollable, and deterioration may extend over 20 or more years (Heston, Mastri, Anderson, & White, 1981). The illness culminates in profound cognitive and behavioral changes including disorientation, bowel and bladder incontinence, and an inability to assist in activities of daily living (Reisberg, 1983; Heckler, 1985). Thus, prolonged caregiving for a demented family member may be conceptualized as a chronically stressful situation (Fiore, Becker, & Coppel, 1983). The loss associated with cognitive decline in a family member has been referred to as a “partial death” in which closure is prevented and grieving exists as a chronic state within the family (Woods, Neiderhe, & Fruge, 1985). A recent discussion of care-receiving emphasized how the provision and reception of care alters transactions within a family (Rakowski & Clark, 1985). In this study the provision of care was linked to decreases in quality of future outlook. From a practical perspective, chronic care provision or reception appears to restrict positive future-oriented fantasy. In other words, caregiving may rob a family of the ability to dream of better things, and instead lock the family into a perpetual focus on the present.

Little data is available detailing caregiver and care-receivers interactions. This is especially true during the early stages of dementia when the effects are subtle and the diagnosis remains tentative. Robinson and Thurner (1979) explored the process transformations from the perspective of the adult child caregiver. They interviewed caregivers of demented and nondemented (frail) parents at baseline, 18 months, and 5 years. Dementia in a parent was linked to negative descriptions of the parent. The transition from positive to more negative attitudes appeared almost exclusively with care for a demented parent. It appeared that the caregivers were unable to attribute negative changes in their parent’s behavior to the effects of the disease. Additionally, care provision was described as interfering with caregivers’ retirement and financial plans, with frustration a frequent result. One important potential confound that was not discussed in the foregoing study is prior relationship between the parent and the caregiver. The role of history in parent-child interactions cannot be ignored. Finding oneself in the role of caregiver or care-receiver may reactivate previously dormant conflicts (Kuyper & Bengtson, 1983; Norris & Forbes, 1987).

The dilemma adult child caregivers face has been widely heralded as the “sandwich effect,” with adult children caught between responsibilities for their own children and aging parents. Yet both adult children and spousal caregivers for a demented family member suffer from the time demands of caregiving. Several studies suggest that they have less time for personal interests and fewer social contacts (Barnes, Raskind, Scott, & Murphy, 1981). Thus, paradoxically, caregivers’ needs for interpersonal support are often increasing while their caregiving responsibilities may limit contacts. Moreover, friends may be less willing to visit because of their discomfort in the presence of the demented person, and/or family members’ own embarrassment may lead them to curtail contacts with others. Thus, the spouses or adult children who most often serve as AD caregivers may be doubly disadvantaged.

There is good evidence that these chronic stresses associated with caregiving for a demented family member may have significant consequences for caregivers’ mental health. Cross-sectional data from several laboratories suggest that the stresses of AD caregiving leave family members at high risk for depression (Crock & Miller, 1985; Eisdorfer, Kennedy, Wisnieski, & Cohen, 1983). In one study of 44 spousal caregivers, 73% either currently met RDC criteria for depression or had met the criteria earlier in the spouse’s illness (Fiore et al., 1983). Similarly, 81% of the caregivers in another sample met DSM-III criteria for major depression (Drinka & Smith, 1983).

George and Gwyther (1984) found substantial deterioration in the well-being of caregivers who provided continuous at-home care in 2 years. Caregivers reported lower life satisfaction, less time for social activities, and increased levels of stress-related psychiatric symptoms than they had reported a year previously. These data were particularly noteworthy, given the face that baseline measures were already quite low.

While these mental health consequences of caregiving for a demented relative have been well-documented, the health-related consequences of this chronic stressor have not been studied as intensively. George and Gwyther (1984), however, found substantial deterioration in self-rated health measures taken one year apart in caregivers who provided continuous at-home care. Brocklehurst, Morris, Andrews, Richards, and Laycock (1981) studied caregivers of another cognitively impaired population, stroke victims. They found that the number of caregivers self-reporting poor health tripled in the year after they begin caregiving for a stroke patient, while those who reported receiving medical treatment increased from 33% to 40%. Finally, comparisons of 44 primary caregivers of AD patients and 44 matched controls showed that the former reported poorer health, more prescription medication use, and higher utilization of health care than the latter (Haley, Levine, Brown, Berry, & Hughes, 1987).

Researchers have begun to address possible pathways through which caregiving stresses could lead to increased risk for physical illness. Kiecolt-Glaser et al. (1987b) explored the immunologic correlates of caregiving in 34 family caregivers of AD victims; these data were contrasted with a sociodemographically-matched sample of 34 individuals without similar responsibilities. AD family caregivers were more distressed and had significantly poorer immune function.
Commonalities in Caregiving Research

As yet, few attempts have been made to integrate research on caregiving across such diverse populations as chronically ill children, mentally ill adults, and demented elderly. However, in a 2-year study of AD and cancer patient caregiver well-being, Rabins, Fitting, Eastham, and Zabora (1987) found no significant differences between the two caregiver groups. Both caregiver groups showed decreases in anger and anxiety over time, while measures of guilt and depression remained stable. Guilt and negative mood decreased most among those AD caregivers who placed their AD family member in a nursing home during the study.

As was stated earlier, a major goal for family members is differentiation (Minuchin, 1974). Family dysfunction is assumed to be secondary to a lack of differentiation. When a child, spouse, or aged parent becomes ill, the transformation into caregiver and care-receiver requires crossing boundaries of independence. Loss of privacy and freedom are commonly lamented by caregiver and receiver. From a family systems perspective these new roles inherently establish a behavioral, if not emotional, enmeshment (Norris & Forbes, 1987).

Problems with decreased time for oneself, fewer social contacts and increased (yet often unmet) desires for interpersonal support appear to exist as common themes in the various literatures. All of these factors combine to form the concept of “burden,” a central theme across the diverse family caregiving literature (George & Gwyther, 1986).

At the simplest level, caregiving burden is measured by dividing burden into objective and subjective realms. Objective burden refers to concrete, observable aspects of the caregiving experience that can be measured quantitatively, including the amount of time spent in caregiving activities, the nature and quantity of caregiving activities, and the nature and frequency of behavior problems manifest by the impaired family member, e.g., wandering or catastrophic reactions (Montgomery, Gonyea, & Hooyman, 1985).

Subjective burden refers to the extent to which family members are distressed by the behaviors of their impaired relative. Not surprisingly, these measures may vary widely across individuals within a family, even when objective burden does not (Montgomery et al., 1985).

In general, the amount of objectively measured burden does not predict caregivers’ distress (Noh & Turner, 1987; Zarit, Reever, & Bach-Peterson, 1980). For example, the level of behavioral and cognitive deterioration in the AD victim seems to be only mildly predictive of the level of caregiver distress (Haley, Levine, Brown, & Bartolucci, in press; Zarit, et al., 1980), and the physical and mental health of caregivers appear to be affected independently of objective dysfunction in the impaired family member.

In contrast, subjectively perceived burden seems to be a much better predictor of distress among caregivers. The predictive power of subjective burden likely exists as a function of its role as a dependent variable, somewhat equivalent to measures of distress. When a caregiver reports a large subjective sense of burden, they may be assumed to be experiencing the sense of burden relative to some internal sense of inability to accommodate the burden. As such, the lack of correspondence between objective burden and distress follows, with the objective level of burden varying independently of coping ability. While there may be some ultimate or absolute limit of objective burden that combines intensive and extended objective caregiving demands, the limits of individual caregivers vary widely across levels of objective burden.

The modest relationships between objective burden and distress may also be due to mediation of objective burden effects by variables such as social support. For example, Fiore et al. (1983) examined social support provided to 44 AD caregivers in an attempt to predict self-reported depression. They found that upsettingness within the social network was the best predictor of self-reported depression in their sample, either because of unhelpful assistance, unmet expectations, or some other variable(s). Similarly, Zarit et al. (1980) found caregivers who received social support in the form of calls and visits from family members felt less burdened than those who did not. Other researchers have reported similar findings.

A further difficulty that arises when attempts are made to measure caregiving burden is that these measures explicitly focus on caregiving per se, and thus cannot be administered to noncaregivers (George & Gwyther, 1986). When very specific burden measures are used, the extent to which the burden experienced by caregivers compares to other life burdens such as high stress occupations, working long hours, and/or existing within an environment with limited social support is unclear.

One method of equating burden across situations involves assessing the extent of interference with desired activities using a standard instrument. The question then becomes how such roles as caregiver, mother, or unattended assistant professor interfere with one’s ability to recreate, engage in social activities, pursue vocational interests, or attend to family responsibilities. Previous research has supported the predictive value of this for both individual and family distress with diverse conditions (Dura & Beck, in press).

Finally, research is largely absent that compares caregiving either between types of conditions and/or compares caregivers with a healthy comparison group. Before statements can be made about relative risk, studies of this nature are required.
MARITAL DISRUPTION

The second major category of negative life transitions that we review includes interference with the marital relationship through death, divorce or separation, and discord. A high level of emotional support is expected and frequently forthcoming from marriages in our culture; indeed, many persons list their spouse as their closest confidant (Lee, 1988). The rest of the chapter discusses how negative marital transitions affect emotional well-being, immune function, health, and mortality.

Bereavement

The irreversible loss of a close companion begins a process of grief and extended transition for the surviving spouse. Bereaved individuals are clearly at increased risk for emotional disturbance compared to their nonbereaved community counterparts (Bloom, Asher, & White, 1978). Moreover, these effects may persist several years or more for a significant number of individuals (Zisook & Schuchter, 1985).

Research on spousal bereavement has shown increased morbidity and mortality among survivors (Jacobs & Ostfeld, 1977; Stroebe & Stroebe, 1983; Windholz, Marmar, & Horowitz, 1985). In one of the more striking studies in the literature, Rees and Lutkins (1967) followed a group of 903 survivors (spouses, parents, children, and siblings) for 6 years following the death of their family member. Mortality was seven times greater among survivors than among 878 well-matched comparison subjects in the first year following bereavement. Although not statistically significant, mortality rates for the bereaved subjects were also higher in the second and third years as well.

In an effort to explore possible physiological mediators underlying these differences in morbidity and mortality, several laboratories have assessed immune and endocrine function. In a sample of 56 persons who were acutely bereaved or threatened with a loss, those individuals whose separation anxiety increased over a period of a month after the event had higher urinary free cortisol output than individuals whose grief decreased (Jacobs et al., 1987).

Bartrop and colleagues showed that bereaved spouses had a poorer lymphocyte proliferative response to mitogen stimulation two to six weeks after their spouses’ death than nonbereaved comparison subjects (Bartrop, Luckhurst, Lazarus, Kiloh, & Penny, 1977). In a subsequent prospective study of bereavement, men whose wives were dying of breast cancer were assessed before and after their wives’ deaths (Schleifer, Keller, Camerino, Thornton, & Stein, 1983). These men had a poorer lymphocyte proliferative response following the death of their spouses, compared to data obtained prior to bereavement. These data suggest that the loss of a spouse can have immunological consequences even when the loss is anticipated, a hardly surprising finding given the psychological sequelae of bereavement described earlier.

Irwin, Daniels, Bloom, Smith and Weiner (1987) examined immune function in three groups: 16 women whose husbands were undergoing treatment for metastatic lung cancer, 10 women whose husbands had died of lung cancer 1 to 6 months prior to their research participation, and 11 women whose husbands were in good health. Multiple samples were collected for each subject. Widows showed the greatest depression and impairments in immune function, consistent with the data from Schleifer et al. (1983).

Although there is good evidence that bereavement is associated with poorer health, there may also be some important differences in spousal health before bereavement. In a survey of 678 elderly residents of Alameda County, California, respondents who reported that their spouses were ill within the last 6 months were also more likely to describe their own health as poorer than individuals whose spouses had not been ill (Satariano, Minkler, & Langhauser, 1984). In fact, the spouse’s health was the best predictor of the respondent’s health.

Marital Separation and Divorce

Some of the strongest evidence linking family transitions with poorer mental and physical health comes from epidemiological studies of separation and divorce. While the related studies on bereavement are better known, the psychological and physical morbidity and mortality associated with separation and divorce reliably exceed those associated with bereavement (Bloom et al., 1978; Verbrugge, 1979). Several studies specifically show differences in infectious disease and are thus directly relevant to the immunological data that have been collected. For example, separated and divorced men have six times as many deaths from pneumonia as married men (Lynch, 1977). Additionally, separated women reported 30% more acute illnesses and physician visits than their married peers (Somers, 1979). Summarizing the evidence for differences in health, Verbrugge (1979) concluded "Separated women are strongly disadvantaged, compared to married ones, for acute incidence, all short-term disability measures, major activity limitations, and partial work disability ... Divorced women are also strongly disfavored. . ." (p. 283).

These epidemiological data demonstrate a strong association between marital disruption and poorer health. In order to assess the possibility that there were concomitant immunological alterations associated with separation and divorce, 38 separated or divorced women and 38 sociodemographically-matched married comparison women completed questionnaires and allowed blood samples to be drawn for immunological and nutritional assays (Kiecolt-Glaser et al., 1987a). The immunological assays included three qualitative or functional assays and three quantitative or enumerative measures.
The experimental hypotheses were derived from attachment theory, the primary conceptual framework used in the divorce literature to explain the differences in post-separation symptomatology (Bowlby, 1975; Weiss, 1975). Within this framework, continued preoccupation with the inaccessible spouse (including either positive or negative affect) leads to “separation distress” and the associated distress-related symptoms. Not surprisingly, attachment feelings generally decline as separation time increases; however, there is considerable variability in the amount of continued attachment in separated and divorced individuals, even for those separated for similar time periods. Based on these factors, both shorter separation periods and stronger feelings of attachment were expected to be inversely related to immune function. These predictions were supported.

In addition, two sets of comparisons were of interest for the separated/divorced and married women. The separated/divorced group had separation times ranging from 3 months to 6 years, with a mean of 1.72 years. The 16 women who had been separated a year or less had significantly poorer immune function on five of the six assays than 16 sociodemographically-matched married women.

Overall group differences were not predicted since the average time since separation in the marital disruption group was almost 2 years. However, comparisons of data from all of the 38 separated/divorced women and the 38 married women showed significantly poorer immune function across three of the six immunological assays in the former, with significantly greater distress in the former as well.

In a similar study, Kiecolt-Glaser, Kennedy, Malkoff, Fisher, Speicher, and Glaser (1988) compared self-report data and blood samples obtained from 32 separated or divorced men and 32 sociodemographically-matched married men. Separated/divorced men were more distressed and lonelier, and reported significantly more recent illnesses than married men; the former also had significantly poorer values on two functional indices of immunity, while not differing on quantitative indices. Those separated/divorced men who had separated within the last year and who had initiated the separation were less distressed, reported better health, and had a better performance on one functional immunological assay than noninitiators.

The discussion thus far has focused on the health related consequences for (ex)spouses; although less well understood, there is some evidence that children may also have health impairments following their parents’ divorce. Guidubaldi and Clemminshaw (1985) compared parent ratings of child health in 341 children whose parents were divorced to ratings of 358 children from intact families. Children of divorced parents had significantly poorer health and more behavior problems than their peers from intact families.

It is clear that marital disruption (either through divorce or bereavement) can be associated with poorer health. These data are perhaps the most striking examples of greater morbidity and mortality associated with family transitions. Moreover, both endocrinological and immunological changes have been demonstrated through convergent data from several laboratories.

Marital Quality

Although data from marital disruption studies have shown that even the termination of a troubled relationship can have adverse physical and emotional consequences, the simple presence of a spouse is not a panacea. Unhappy marriages are reliably associated with increased distress: on the average, unmarried persons are less distressed than those in troubled marriages (Glenn & Weaver, 1981; Pearlin & Lieberman, 1979). Having a close confidant who is not the spouse is associated with lower marital satisfaction as well as lower emotional well-being (Lee, 1988). In addition, poorer marital quality has been associated with poorer health; in a study by Renne (1971), unhappily married people reported poorer health than either divorced or happily married individuals of the same age, sex, and race.

Data from Levenson and Gottman (1985) provide evidence of a physiological pathway through which chronically abrasive relationships could affect health. They found that greater autonomic arousal in interacting married couples was strongly predictive of larger declines in marital satisfaction 3 years later; greater marital satisfaction decrements were also strongly correlated with self-ratings of poorer health. If a spouse’s presence in a disturbed relationship is associated with relatively consistent physiological arousal, then there could be concurrent endocrinological alterations that could have an impact on the immune response (O’Dorosio et al., 1985).

In the studies on marital disruption and immunity described earlier (Kiecolt-Glaser et al., 1987a; Kiecolt-Glaser et al., 1988) relationships between marital quality and immune function were also assessed. For women, poorer marital quality was significantly associated with greater depression and loneliness in hierarchical multiple regression equations, after entering the subject’s education, her husband’s socioeconomic status, and the number of negative life events on previous steps. Poorer marital quality was also associated with poorer responses on functional immunological measures. Similar results were obtained with men.

A Final Note on Stress and Health Related to Family Transitions

There is good evidence for greater health impairment in more distressed populations in individuals whose marital relationship has been disrupted through divorce or death, and in older adults whose interpersonal relationships are less satisfactory and/or less numerous. Moreover, some of the more provocative
evidence suggesting that family interactions may have health consequences comes from research on utilization of medical care following family therapy. Doherty (1985) reviewed studies suggesting that there were declines in health care utilization among patients who received family therapy for emotional problems as compared to matched controls. However, there are a number of other factors to be considered in interpreting these data.

Methodological problems that are common in many of the studies discussed in this chapter include few longitudinal or prospective designs, a paucity of control or comparison groups for understanding the actual impact of the stressors, heavy reliance on correlational designs, and the infrequent use of rigorous subject or case selection criteria. Thus, the psychological and physiological processes that may underlie any observed differences cannot easily be assessed.

In addition, many of the studies assessed health by self-report, frequently by such methods as asking individuals to rate their health as excellent, good, fair, or poor. It is well-known that individuals who are more distressed tend to focus more on somatic symptoms, so that health ratings in this context are difficult to interpret.

Furthermore, there may be other explanations for much of the data described. For example, in discussing alternative explanations for the findings that respondents whose spouses were ill describe their own health as poorer (Satararino et al., 1984), several possible explanations were proposed. First, individuals who share the same environment and lifestyle may also share greater risk for certain health problems. Second, in the case of marriage, those individuals who are already in poor physical or emotional health may select mates who share similar poorer health characteristics (Bloom et al., 1978). Finally, illness in a spouse or other significant family member may create strains that cause a caregiver to alter his/her perceptions of his/her own health, i.e., the presence of an ill family member may alter the family norms for health and well-being.

In addition, many of the transitions described in this chapter are associated with financial strains; for example, many caregivers suffer financial losses related to the medical expenses of the patient, as well as through a decreased ability to work outside the home. Similarly, bereavement and divorce are often associated with downward financial alterations as well. Thus, individuals in these circumstances may have less money for their own medical treatment, leading to the neglect of less severe symptoms. Similarly, the focus on a more seriously ill individual within a family may lessen attention to less serious medical problems in other family members.

Health risks related to family transitions may be mediated by a number of other variables as well. For example, it has been suggested that marital disruption or other major life changes might have adverse effects on health because of differences in risk-related health behaviors; e.g., more distressed individuals may drink, smoke or use alcohol and drugs more than their less distressed counterparts, and/or they might have poorer diets and get less sleep (Verbrugge, 1979). These behaviors undoubtedly contribute to the health differences consistently reported in epidemiological studies. However, researchers in behavioral immunology normally use good health and the absence of prescription or non-prescription drug use as screening criteria; subjects are excluded who report excessive alcoholic consumption. Differences have not been found in sleep or nutritional status that are of sufficient magnitude to account for the observed immunological differences (Chandra & Newberne, 1977) in the populations studied to date. Thus, while some of the differences in the epidemiological literature may reflect risk-related life style variables, it is also possible that there are persistent distress-related physiological changes that could make an additional contribution to the observed health difference.

A final caveat is in order with respect to the immunological data. While it is reasonable to assume that both transient and more chronic immunosuppression may have adverse health consequences, the longitudinal studies that are essential for providing information on the magnitude of these effects and their association with the incidence, duration, and intensity of infectious disease are largely absent from the literature. The critical connections between stress-related immunosuppression and actual health changes are not well-established, with a few exceptions (Glaser et al., 1987; Kasl, Evans, & Niederman, 1979; Pennebaker, Kiecolt-Glaser, & Glaser, 1988). These kinds of studies are essential for our understanding of family-related stressors, transitions, and health.

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REFERENCES

3. FAMILIES, STRESS, AND HEALTH

and separation anxiety early in the course of bereavement and threatened loss. Biological Psychiatry, 22, 148–152.


