

Close Relationships and the Management of Chronic Illness: Associations and Interventions

Lynn M. Martire
The Pennsylvania State University

Vicki S. Helgeson
Carnegie Mellon University

Self-management of a chronic illness involves not only monitoring symptoms, adhering to medication regimens, and keeping medical appointments but also making and maintaining difficult lifestyle changes. This article highlights correlational and intervention research suggesting family members are influential in children's and adults' illness management. The argument is made that a dyadic approach to chronic illness management that targets the influence of close relationships may yield more sustainable effects on patient behavior than has been achieved in the past. In particular, dyadic approaches aimed at helping patients and family members to find ways to collaborate in goal setting for these behaviors is recommended. Such dyadic interventions may also benefit family members who are ill or are at risk because of poor health behaviors.

Keywords: family relationships, interventions, chronic disease, dyadic

The impact of close relationships on health has perhaps no greater public health significance than in the case of chronic illness management. Approximately half of the adult population has one or more chronic illnesses (Ward, Schiller, & Goodman, 2014), and 84% of all health care spending is for their care (Robert Wood Johnson Foundation, 2010). It is difficult to determine the number of children with chronic illness, as definition of the term varies. The University of Michigan Health System (2015) estimates that between 15 and 18% of children in the United States have a chronic health condition. Regardless of the specific definition, it is clear that the rates of chronic illness in children have increased over the past few decades (Van Cleave, Gortmaker, & Perrin, 2010).

Self-management of chronic illness can reduce health care costs (Panagioti et al., 2014), but is often difficult for patients to achieve. Effective self-management involves not only monitoring symptoms, adhering to medication regimens, and keeping medical appointments but also making and maintaining lifestyle changes such as healthier eating and increased physical activity. Behavioral interventions that harness the influence of close relationships on health can play an important role in reducing the burden of illness management on society. Unfortunately, the number of studies that focus on the implications of the family for illness management or that test dyadic family interventions for illness management is relatively small compared to the number of studies that examine implications of the family for patients' psychological well-being (see DiMatteo, 2004, for an exception in regard to medication adherence and support from all social partners). This is an area in which more research is clearly needed.

This article describes research findings that suggest family members are influential in children's and adults' illness management and highlights some successful dyadic intervention approaches for improving chronic illness management. The phrase "dyadic approach" is used throughout the manuscript, but in recognition that some family interventions for children involve multiple family members (e.g., both parents). For the purposes of this article, illness management is defined as concrete, discernible behaviors that are critical for survival (e.g., medication adherence) or improving health (e.g., regular exercise). Where possible, Berg and Upchurch's (2007) dyadic developmental-contextual model of coping with chronic illness and Lyons,

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Authors' note. Lynn M. Martire, Department of Human Development and Family Studies, The Pennsylvania State University; Vicki S. Helgeson, Department of Psychology, Carnegie Mellon University.

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Correspondence concerning this article should be addressed to Lynn M. Martire, Department of Human Development and Family Studies, The Pennsylvania State University, 422 Biobehavioral Health Building, University Park, PA 16802. E-mail: lmm51@psu.edu



**Lynn M.
Martire**

Mickelson, Sullivan, and Coyne, (1998) model of communal coping are used as frameworks for describing constructs and processes studied in child–parent dyads as well as couples. Both of these models consider two components of dyadic interaction: (a) Whether dyads appraise the illness as shared or primarily the patient’s in terms of illness representations, ownership, and stressors and (b) the nature of family members’ involvement in the illness. The first component of this framework is referred to as appraisal and the argument is made that a shared or communal appraisal is most beneficial for illness management. The second component refers to the behaviors that are enacted in response to the stressor, and the argument is made that collaborative behaviors are most effective.

Table 1 lists the major terms used in both the parent–child and adult couple literatures to describe the ways that parents and children or couples are involved in illness management. Many of these terms are represented in Berg and Upchurch’s (2007) framework of involvement in which family members are characterized as uninvolved, supportive, col-

laborative or controlling, and Lyons et al. (1998) two dimensional stress appraisal (shared vs. individual) by action orientation or responsibility (joint vs. individual) framework. In the latter theory, the two dimensions of stress appraisal and action orientation form four quadrants that correspond with communal coping, support seeking, support provision, and individualism. However, there is no single framework that unifies all of the major ways in which the literature has shown patients and partners manage illness. This article concludes with a synthesis of literatures and recommendations for future relationship-based approaches to health and illness management. Discussion of methodological and conceptual issues can be found in previous publications (Martire, 2013; Martire, Schulz, Helgeson, Small, & Saghafi, 2010).

Parental Influence on Children’s Illness Management

Some of the most common childhood chronic illnesses are asthma, diabetes, cerebral palsy, cystic fibrosis, cancer, spina bifida, and congenital heart problems. Much of the research that is described here focuses on asthma and diabetes because these illnesses have been widely studied, are among the most prevalent childhood chronic illnesses, and involve a number of self-care behaviors that make adherence critical to disease management. One in 10 children have asthma (Centers for Disease Control and Prevention, 2014), whereas .25% of children have diabetes but the rate has escalated dramatically over the past several decades (Centers for Disease Control and Prevention, 2014).

Overall, a warm and supportive home environment with good family communication in general has been linked to better chronic illness outcomes, including better illness management (Helgeson & Palladino, 2012). The positive aspects of the family that are most often linked to high rates of adherence are high family cohesion and family organization, whereas the negative aspects of the family that are linked to poor adherence are high family conflict and parental criticism (see Drotar & Bonner, 2009, for a review). These aspects of the family are not necessarily disease-specific, as they are related to positive outcomes among

Table 1
Relationship Constructs in Parent–Child and Adult Couple Illness Management

Uninvolved, avoidant: Partner is not involved in patient’s illness management.
Supportive: Partner provides emotional or instrumental assistance with patient’s illness management.
Autonomy supportive: Partner shows understanding for patient’s preferences and provides choices for making health behavior changes.
Overinvolved, overprotective, solicitous, controlling, pressure: Partner provides an excessive amount of assistance that may or may not be viewed by the patient as unwanted or “too much,” potentially undermining independence and personal efficacy.
Collaborative, shared responsibility: Partner and patient work together to manage the illness.
Shared illness appraisal: Person (either patient or partner) perceives illness as a joint problem to be managed.
Communal coping: Shared illness appraisal and collaboration to manage illness.
Unsupportive: Partner behaves in negative ways, such as being critical, rejecting, or inspiring conflict, that do not help to manage illness and may undermine it.



**Vicki S.
Helgeson**

healthy children (Collins & Steinberg, 2007). Two studies of adolescents with diabetes show that greater parent supportive behavior and lower levels of parent unsupportive behavior are linked to better diabetes adherence (Helgeson et al., 2014b; Ott, Greening, Palardy, Holderby, & DeBell, 2000). In one, the link between parent unsupportive behavior and nonadherence was mediated by child self-efficacy (Ott et al., 2000), suggesting that parental conflict and criticism undermined children feeling capable of managing the disease. Studies of children with asthma have shown links between parent criticism and poor adherence (e.g., Wamboldt, Wamboldt, Gavin, Roesler, & Brugman, 1995).

One issue that families face with respect to childhood chronic illness is the distribution of responsibility for illness management. Parental involvement in illness management is critical to good adherence, especially among illnesses that require a large number of self-management behaviors. For example, in the area of diabetes, children have to monitor what they eat, engage in exercise, test blood sugar, and administer and adjust insulin levels based on the previously mentioned activities. In the area of asthma, parents help to identify symptoms and make decisions about which medications to use and when to administer them. Research is clear that parental involvement in illness management in terms of either supporting the child's efforts or collaborating with the child is linked to better self-care behavior, even among older adolescents (e.g., Helgeson et al., 2008; Psihogios & Holmbeck, 2013). Note that these findings are based on how the family manages the illness—that is, the specific behaviors of families. Family appraisal of the illness as shared or belonging only to the child has not been investigated.

The finding that parent–child shared responsibility is linked to good adherence is important because parental involvement in illness tends to decrease with age (Ingerski et al., 2010; Walders, Drotar, & Kerckmar, 2000). With increased age, parents assume that children are better able to manage the illness on their own but this may not always be the case. Parents may overestimate children's capabilities. One study of Black families found that adolescents with asthma had the worst adherence when parents overestimated how much responsibility adolescents were taking for managing their illness (Walders et al., 2000). Because the illness regimen can be complex, assuming that children can handle the required health behaviors alone is problematic. More important than chronological age is the child's capacity or level of maturity to assume responsibility for self-care. One study of children with diabetes showed that excessive self-care autonomy (i.e., ratio of autonomy relative to maturity) was related to poorer self-care and worse glycemic control (Wysocki et al., 1996). Parental involvement in illness management is especially critical among children who are low in psychosocial maturity (Palmer et al., 2004) or self-efficacy (Wiebe et al., 2014).

Shared responsibility among children and parents reflects collaboration or joint behavioral efforts to address the problem. Collaborative behavior can be distinguished from shared appraisal, which reflects the perception that the problem belongs to both persons. Whereas this distinction has been made in the literature among adults, it has not been made in the literature on children with chronic illness. Parent–child collaboration decreases with age, but it is not clear if this change in behavior is because of a shift in appraisal. When children are young, parents may appraise the illness as a shared problem but then come to view it as more of the child's problem with increased age. If the appraisal did not shift, collaborative coping might be maintained.

Health care professionals might be concerned that parental involvement in illness management interferes with the development of children's self-management skills. The contrary appears to be true. There is evidence from a study of young adolescents (ages 10–14) with Type 1 diabetes that parental involvement is associated with an increase in child self-efficacy that in turn is linked to good adherence (Berg et al., 2011). A follow-up of those same children showed that a decline in parental involvement in illness management over 2.5 years was associated with a decline in child self-efficacy (King, Berg, Butner, Butler, & Wiebe, 2014), suggesting that early transfer of responsibility from parent to child prevents development of child self-efficacy.

Parental involvement in illness does not mean that parents are the sole managers of illness. In fact, parental involvement is most effective when it is collaborative with the child, consistent with Berg and Upchurch's (2007) model. One study of youth with diabetes distinguished among

mothers who were uninvolved, controlling, or collaborative, and showed that collaboration (i.e., working together) was linked to better adherence (Wiebe, Berg, Korbel, et al., 2005). Collaboration has been represented in the asthma literature as “balanced integration of asthma,” which suggests that optimal management involves integrating the illness into the family’s daily routine (McQuaid et al., 2005).

It is important for researchers to distinguish parental involvement in illness management from parental controlling behavior. It is quite easy for concerned parents’ behavior to shift from involvement to controlling or overprotective behavior. Literature on healthy children has shown that parent controlling behavior is linked to poor child adjustment (e.g., Kerr & Stattin, 2000). The effects of parent controlling behavior on children with chronic illness, however, are mixed. One study of adolescents with Type 1 diabetes showed that parent controlling behavior was linked to poor adherence among older adolescents but not younger children (Wiebe, Berg, Korbel, et al., 2005), whereas another study of adolescents with Type 1 diabetes showed that parent controlling behavior at age 12 predicted *better* self-care behavior at age 19 (Helgeson et al., 2014a). In a study of children with spina bifida, parental overprotectiveness was linked to lower levels of child autonomy that in turn predicted greater externalizing problems (Holmbeck et al., 2002). A daily diary study of adolescents with diabetes showed the mixed effects of parental control. Parents’ daily use of persuasive strategies (e.g., reminding) was related to better blood glucose values the next day but also a reduction in adolescents’ confidence (Berg et al., 2013). Thus, parent control may enhance illness management but at a psychological cost that undermines future behavior.

A construct that provides a sharp contrast with parent controlling behavior is parent autonomy-supportive behavior. The construct of autonomy in healthy children was initially viewed as autonomy *from* parents or separation, but it is now recognized that autonomy can, and should, be achieved in the context of parental support (Allen & Land, 1999). The concept of autonomy support originates from Self Determination Theory (Deci & Ryan, 1985) and is characterized by showing understanding for an individual’s preferences and providing choices for health behavior changes. Autonomy and closeness are considered complementary and not opposites, and research has shown that autonomy within a context of support is related to good adjustment outcomes in healthy middle and late adolescents (e.g., Allen, Hauser, O’Connor, Bell, & Eichholt, 1996). The implications of autonomy support for children with chronic illness have not been examined. However, one study on teens with or without diabetes found that autonomy operationalized as independent decision-making was related to good psychological outcomes among healthy controls but unrelated to distress and related to increased eating distur-

bances among youth with diabetes (Helgeson, Reynolds, Becker, Escobar, & Siminerio, 2014). Autonomy also was related to poor self-care behavior among youth with diabetes. These findings underscore the idea that “control” and “autonomy” may have different meanings and implications in the context of disease management in children.

Parent/Family Characteristics

Characteristics of parents or the larger family system may influence child illness management. One of the most obvious ways that family members can influence health behaviors is through modeling. Parents can influence children’s health behaviors by creating an environment that is conducive to healthy eating (e.g., have fruits and vegetables available) or physical activity (e.g., availability of exercise equipment, limited media exposure) and by directly modeling good health behaviors. There is evidence that parent healthy eating is linked to children’s healthy eating (Nansel et al., 2013), and that parents serve as role models for engaging in physical activity as well as sedentary behavior, such as watching TV (Granich et al., 2010). Intervention efforts that have targeted parents’ health behavior have shown positive effects on children’s eating and physical activity (Natale et al., 2014).

Although modeling applies well to physical activity and diet, it is more difficult for parents to model some of the behaviors that are critical to the management of childhood chronic illness, such as medication adherence. One innovative study used parent modeling of diabetes care (i.e., testing, injections of saline) in an effort to increase parents’ understanding of illness burden (Wysocki et al., 2006). In this way, modeling is not only a useful tool to promote adherence but can also serve as a source of support.

Parents also can indirectly influence child adherence via their understanding of the illness and their beliefs about the most effective treatment (Drotar & Bonner, 2009). Parents might be concerned about the side effects of medication or express skepticism about conventional medicine. In the area of asthma, greater parental concerns about conventional medicine have been linked to child nonadherence (Conn et al., 2005), whereas parental beliefs about the necessity of medication have been linked to enhanced adherence (McQuaid et al., 2009). Parent beliefs in complementary and alternative medicines have been linked to risk for nonadherence (Adams, Murdock, McQuaid, & Lima, 2011).

Adherence in the area of childhood chronic illness also must be considered in the context of the entire family. Childhood chronic illness does not occur in a vacuum, but in the context of families that may have competing demands and limited resources. For example, managing asthma is more difficult in families with lower socioeconomic resources (Drotar & Bonner, 2009; Koinis-Mitchell et al., 2007). Caregivers may face other sources of stress, and

research has shown that caregiver distress is related to child adherence (Drotar & Bonner, 2009). Caregiver distress may interfere with the ability to help children manage their disease.

Parent–Child Interventions

Most interventions in the area of childhood chronic illness have applied a family systems perspective, which recognizes that the illness affects the family and the family affects the illness. These interventions typically target specific family interactions. A systematic review of interventions for adolescents and young adults with chronic illness showed that the best outcomes occurred when interventions focused on communication skills, had some practical component, involved at least six sessions, and lasted at least 3 months (Samsom-Daly et al., 2012). Thus, there was stronger support for interventions that targeted the development or enhancement of skills. Interventions in the area of diabetes were especially likely to be skill-based and were more likely to involve the family than were interventions in other chronic illnesses. Family based interventions typically show stronger benefits when they are theory-based than not, in part because they address changeable family processes rather than targeting a specific child behavior (Hilliard et al., 2016). The successful interventions described below target the collaborative coping processes described throughout this article.

There are two types of family based interventions that have had substantial success in the area of diabetes: Family Teamwork (e.g., Anderson, Brackett, Ho, & Laffel, 1999) and Behavioral Family Systems Therapy (BFST; e.g., Wysocki et al., 2008). Family Teamwork is an intervention that is focused on shared responsibility for diabetes management. Thus, it is based on correlational research showing that parental involvement and collaborative management is linked to the best adherence outcomes. Family Teamwork has been associated with improved adherence and improved glycemic control and maintenance of family involvement in diabetes management (Anderson et al., 1999, 2000). More important, maintenance of family involvement does not come at the expense of an increase in family conflict surrounding diabetes management but is instead associated with a reduction in conflict (Anderson et al., 2000).

BFST focuses on enhancing parent–adolescent communication and problem-solving, particularly around diabetes management. In the first studies, BFST was related to improvements in parent–child relationships and improved communication but did not affect adherence (Wysocki et al., 2001). A revised version that included a greater focus on diabetes-specific behaviors and parent simulation of diabetes self-care behaviors (e.g., blood glucose testing) resulted in improved adherence and reduced conflict surrounding diabetes management (Wysocki et al., 2006). The improved

communication associated with the intervention was related to improved adherence (Wysocki et al., 2007).

In the area of asthma, Fiese and Wamboldt (2000) have recommended the development of a family intervention to enhance adherence that focuses on family routines and rituals. Consistent with our discussion of the research on collaboration, they argue that families who are able to integrate asthma into the family routine or develop a routine that incorporates asthma will show the best child adherence. In fact, research has linked family asthma routines to childhood adherence (Fiese, Wamboldt, & Anbar, 2005), and family routine-based interventions have been successful in other areas, such as families in which children have or are at risk for developmental delays (Hwang, Chao, & Liu, 2013). The authors also suggest that such an intervention needs to be tailored to match the family's style of routine organization.

Spousal Influence on Adults' Illness Management

A growing literature on couples and chronic illness (including intimate relationships in which partners are not legally married or of the same sex) examines spouses' social support and control of patient health behaviors. Similar to the literature focused on children, there is great interest in the range and nature of controlling behaviors and their implications for patients' self-management. Health-related social control has been examined primarily in adult populations and is measured either globally or in terms of negative (e.g., nagging) versus positive (e.g., encouragement) control strategies used by spouses. This literature has yielded mixed findings with regard to the positive and negative effects of different spousal strategies (Martire, Hemphill, & Polenick, 2016). Some of the most consistent findings are for social control in the form of pressure. Pressure involves attempts to coerce an individual to make improvements in health behaviors and is often characterized by nagging or inducing guilt (Lewis & Rook, 1999). Although there are exceptions, pressure is often associated with poorer illness management. For example, in research on HIV+ men, partner pressure has been associated with fewer self-care behaviors such as taking medication and practicing safe sex (Fekete, Geaghan, & Druley, 2009).

Because illness management often requires repeated daily behaviors, recent research has taken the valuable approach of examining the link between marital interactions and illness management at the daily level. In one study, individuals with Type 2 diabetes showed increased adherence to a diabetic diet on days when the spouse provided more support for good dietary choices, but decreased adherence on days when the spouse exerted more pressure to improve dietary choices (Stephens et al., 2013). In another study, men with knee arthritis spent fewer minutes in moderate intensity activity (as measured by accelerometers) on days

when the spouse pressured them to be more physically active (Martire et al., 2013).

Autonomy support may be another source of spouse influence on health or illness management. The bulk of the literature on autonomy support for health behavior change has focused on adult patients and their health care providers, showing that a more autonomy-supportive health care climate is moderately associated with greater exercise or physical activity (Ng et al., 2012). As a specific example, individuals with Type 2 diabetes whose physician is more autonomy supportive feel that they are better able to regulate their blood glucose and subsequently have improved glucose control over 1 year (Williams et al., 1998).

There is recent evidence that spouse autonomy support also may be important for health and illness management. For individuals participating in a dyadic weight loss intervention, greater autonomy support from the intervention partner (77% spouses) predicted better weight loss than more directive forms of support (Gorin, Powers, Koestner, Wing, & Raynor, 2014). In addition, individuals with knee arthritis had more moderate physical activity and took more steps on days when the spouse provided greater autonomy support for activity, independent of the effects of pressure control (Martire et al., 2013). Autonomy support is likely to take on a somewhat different form when it is provided by a close family member rather than a health care provider, and therefore, it may be useful to further refine the construct and its measurement specific to family. For example, spouses are not in a position to provide choices about health behavior changes but their acceptance of patients' decisions may ultimately encourage positive change.

Although spousal behaviors such as pressure and autonomy support are likely to have an effect on patients' health behaviors, it is likely that modeling is an equally important influence (Bandura, 1997). As is true for parents and children, spouses can serve as either good or bad role models for adults. It has long been established that there is a high rate of concordance in spouses' health-enhancing and health-compromising behaviors such as smoking, alcohol use, dietary habits, and physical activity (e.g., Franks, Pienta, & Wray, 2002; Li, Cardinal, & Acock, 2013). There is emerging evidence that spouses are also influenced by each other's change in health behaviors. Married women report greater self-efficacy for eating a healthy diet and exercising, and married men report more self-efficacy for losing weight, if their spouse is ready to do so (Franks et al., 2012). Moreover, improvement in one individual's behavior (smoking cessation, physical activity, and weight loss) has been shown to predict improvement in that same behavior in the spouse (Jackson, Steptoe, & Wardle, 2015).

Contextual Factors

Gender and gender-linked traits are characteristics likely to moderate the effects of spouse influence on illness management. One study found that spousal social control had a

greater positive influence on smoking cessation in men than in women (Westmaas, Wild, & Ferrence, 2002). In contrast, other research suggests that male patients have poorer illness management behaviors in response to controlling or overprotective behaviors of the spouse (Martire et al., 2013), and female patients are more bothered by partner avoidance of illness management issues (Helgeson, Schlisserman, Kim, & Chen, 2015). The latter findings are consistent with gender role theory that posits that men are more likely to be characterized by agency and a focus on individuation from others, whereas women prefer communion and connection with others (Spence, Helmreich, & Holahan, 1979). By extension, men may react more strongly to coercive strategies aimed at changing their behavior, whereas women may prefer spouse controlling behaviors over no involvement at all. This is clearly an area in which more research is needed, including consideration of whether the role of gender may differ depending on whether the illness management behavior of interest involves cessation of an unhealthy activity such as smoking or initiation of a healthy activity such as regular exercise.

Another important contextual factor is the extent to which couples appraise the illness and its management as a shared responsibility between partners. The effects of support, collaboration, and control may be stronger when partners view the patient's illness as a shared problem rather than only the patient's issue (Berg & Upchurch, 2007). In the recent diary study of individuals with Type 2 diabetes (Stephens et al., 2013), diet-related support was most strongly associated with decreased diabetes distress in couples who appraised illness management as a shared problem rather than solely belonging to the patient, but pressure was most strongly associated with decreased daily adherence to the diabetic diet in these same couples. Thus, shared appraisal may lead patients to respond more strongly to both negative and positive spouse behaviors.

Couple Interventions

Most couple-oriented interventions for chronic illness are targeted at improving psychosocial functioning and patients' illness symptoms. These interventions have significant but small effects on patients' depressive symptoms, marital functioning, and pain (Martire et al., 2010). Relatively few couple interventions have been developed to improve illness management, and some have found an advantage of this approach over one that is solely patient focused whereas others have not. There are methodological explanations for some of the null findings, such as inadequate statistical power to detect differences between active treatments. The literature is too small to draw conclusions regarding efficacy, so the characteristics of efficacious dyadic interventions to improve illness management will be described.

Some researchers have successfully “harnessed” the influence of spouse modeling and shared goal setting. These interventions can be thought of as taking a partner-assisted approach (Baucom, Porter, Kirby, & Hudepohl, 2012), where spouses are trained in how to help patients make needed behavioral changes, often by engaging in activities with them, and there is little focus on improving communication or relationship functioning. One early study showed that getting spouses to participate in relaxation therapy with hypertension patients resulted in greater use of this technique by patients (Wadden, 1983). More recently, a partner-assisted approach was used in an effort to reduce low-density lipoprotein cholesterol (LDL-C) through improved diet and physical activity. Patients in this intervention reduced their caloric and saturated fat intake and increased their level of physical activity, but there was no significant change in LDL-C (Voils et al., 2013). Spouses did not show improvement in physical activity or dietary intake, raising the question of whether an intervention should focus on both partners’ health behavior goals (King, Jeffreys, McVay, Coffman, & Voils, 2014). Consistent with this idea, research on healthy couples has shown that forming collaborative implementation intentions with a partner (e.g., if-then plans about when, where, and how an exercise goal will be met) results in increased physical activity and decreased fat consumption (e.g., Prestwich et al., 2012).

Optimizing partner communication and problem-solving skills has been successful in improving HIV medication adherence (Remien et al., 2005). In addition, dyadic interventions targeting communication and support in Type 2 diabetes have resulted in improved eating behaviors and weight loss or decreased waist circumference (Trief et al., 2011; Wing, Marcus, Epstein, & Jawad, 1991). In the study by Wing and colleagues, women benefitted more than men from a couple-focused intervention. To date, researchers have given little attention to developing dyadic interventions that target social control or autonomy support. One notable exception is a recent intervention for Latinas with Type 2 diabetes and their overweight adult daughters that targeted dietary intake and health-related interactions (Sorkin et al., 2014). This dyadic intervention was modeled after the Diabetes Prevention Program and resulted in increased consumption of food with low glycemic load and saturated fat, and weight loss, for both partners. In addition, participants reported an improvement in health-related support and control, as well as less undermining (e.g., temptations from the partner to eat food high in sugar or fat). This study was innovative in its focus on mechanisms of dyadic intervention effects.

An early research literature focused on dyadic weight loss interventions for otherwise healthy individuals suggests specific strategies that could be incorporated into couple interventions targeting illness management (see review by Black, Gleser, & Kooyers, 1990). These behavioral weight

loss programs used strategies such as spouse reinforcement of behavior change, support for patient autonomy in behavior change, and dyadic goal-setting. These programs resulted in modest improvements in overweight individuals’ initial weight loss and maintenance of weight loss over time, and some also showed weight loss in spouses. More recently, Gorin and colleagues’ (2014) successful weight loss intervention targeted participants’ home environments (e.g., types of foods present and availability of exercise equipment) and also enlisted a partner (77% spouses). Weight loss was significantly greater among female than male participants.

Synthesis and Recommendations for Relationship-Based Approaches to Health and Illness Management

Parent or spouse involvement in illness management can be viewed as ranging from underinvolvement to overinvolvement, with the extremes being associated with poorer management and supportive or collaborative actions most likely to be beneficial. Across research on children, adolescents, and adults, there is an emerging theme that controlling behaviors of a parent or spouse (e.g., pressure, overprotection) undermine patients’ self-management. These behaviors may be associated with greater adherence in the short-term but at a cost to psychological outcomes and a later cost to behavioral outcomes if self-efficacy is threatened. Underinvolvement could be equally harmful (particularly for children) and also is worthy of attention. Lack of involvement may be because of families having competing burdens or a belief that the illness is primarily the patient’s problem. Findings from these literatures are consistent with what is known about adaptive and maladaptive processes in relationships more generally. For example, spouses and parents often exert control in regard to a variety of behaviors and not just those that are oriented toward health. These attempts to exert control take on added importance and complexity in the context of chronic illness, when poor self-management may be life threatening.

Research on family and illness management suffers from the same limitations of the broader literature in terms of lack of diverse samples and attention to health disparities. Recruitment, assessment and treatment of more than one individual in families living with chronic illness is challenging, and conducting research with hard-to-reach populations is especially difficult. The increased attention to Latino/Latina families is especially encouraging (e.g., Sorkin et al., 2014). Recent work on couples and diabetes (41% Black) showed that patients who felt understood and cared for by partners reported a better mood and were more likely to take care of themselves on a daily basis, whereas patients whose partners were controlling reported poorer mood (Helgeson, Mascатели, Seltman, Korytkowski, & Hausmann, 2016).

Characteristics of the patient or family member may serve as important contextual factors or moderators of family influence and dyadic interventions on illness management. The child and adult literatures have focused on different moderators. Research on adults suggests that male patients may react negatively more negatively than female patients to spouses' attempts to control their illness management, but at this point it is difficult to draw conclusions regarding the role of gender. Some research suggests that couple interventions are especially beneficial for women managing diabetes (Wing et al., 1991) or at risk for diabetes and other chronic conditions because of being overweight (Gorin et al., 2013). If this finding is replicated in future research, it will be important to identify the reasons for this gender difference. One explanation is that women are traditionally involved in the health of family members because caretaking is part of the female role, whereas men might require an intervention to enhance involvement in a spouse's health.

Study findings point to possible mechanisms linking family influence to patient illness management, consistent with the tenets of Social Cognitive Theory (Bandura, 1997) and Self Determination Theory (Deci & Ryan, 1985). Specifically, self-efficacy for health behavior change and a related concept, perceived competence, can be enhanced by support or eroded by controlling behaviors. Less attention has been given to these mechanisms in the couples' literature than in research on children and their parents, and little is known about the effects of modeling healthy behaviors on patients' self-efficacy at any age.

A dyadic approach to chronic illness self-management is recommended, aimed at helping patients and close family members to find ways to collaborate in goal setting for these behaviors, and research evaluating the efficacy of this approach. For both children and adults, dyadic interventions could be tailored based on appraisal of the illness. For dyads who appraise the illness as a shared problem, the focus would be on enhancement of support and collaboration and minimization of control strategies. If one or both partners view the illness as primarily the patient's problem, the preferred approach would be to first change this appraisal through education regarding the advantages of working together to achieve health-related goals, and then to enhance support strategies and minimize use of control. Adults who have been living with a chronic illness before their marital relationship (e.g., childhood onset of Type 1 diabetes) may be especially likely to perceive the illness as their own responsibility and find it difficult to involve the spouse in illness management and enlist their support. Previous research suggests that it is feasible to change partners' views on whether an illness is shared by getting them to think in terms of "we" and "ours" versus "I," "me," and "you" (Fitzsimons & Kay, 2004).

Taken collectively, based on theory and recent research, a combination of shared illness appraisal and collaborative

illness management may result in optimal health behavior outcomes for most dyads. Clearly, dyads who have dysfunctional relationships (e.g., physically abusive) may not be transformed by an intervention focused on collaboration. Similarly, dyads in which partners have severe psychological or physical health concerns may not have the resources to participate in a collaborative approach to the patient's chronic illness.

Dyadic interventions may be especially beneficial if developed for at-risk dyads, such as those in which patients are struggling with illness management or those with poor communications skills in regard to health. These are the dyads who might benefit the most from an approach that pools patient and partner resources. An alternative approach is to target a broad population of patients and family members but tailor the intervention to a dyad's needs. For example, poor health behaviors in the parent or spouse may be the central issue to target in a dyadic intervention for chronic illness management rather than communication about health behaviors and self-care. This would likely be most successful if both partners are at or beyond the contemplation stage of making needed changes (Prochaska & Velicer, 1997). In addition, some patients prefer to engage in activities with a partner to meet health-related goals, whereas others prefer to do these activities on their own. Therefore, the best approach may be to allow dyads to form either individual or collaborative implementation intentions (if-then plans about when, where, and how; Prestwich et al., 2012).

It is important for interventions to shift away from a focus on individual chronic illnesses. Many chronic health conditions among children and adults have similar self-management tasks such as medication adherence, symptom monitoring, and dietary restrictions. In the case of adults, the majority of those with chronic illness, especially those over age 65, have multiple health conditions. Cross-disease approaches are valuable for both prevention and treatment of health problems, as many of the most common conditions in adulthood are brought about by the same poor health behaviors and affected by change in these same behaviors. Unfortunately, the cross-disease perspective is more commonly adopted for prevention than for treatment. Second, there is a need for interventions aimed at families or couples in which the spouse or other family members are at risk or living with a chronic condition. Third, research on adults would benefit from broadening the focus beyond the spouse. This is especially important in minority communities where spouses are lacking and other family are more important.

There is certainly more to learn about the influence of family behaviors on patient illness management. However, it is not too soon to develop theory-based interventions that aim to change specific family behaviors and examine subsequent effects on patient illness management. Because of

the multifaceted nature of coping with chronic illness, most psychological or behavioral interventions (dyadic or patient-focused) have multiple components such as health education, stress management, and cognitive-behavioral skills training. In these designs it is challenging to establish which component or components have a beneficial effect. An alternative approach is to develop and test theory-driven interventions that target one specific process. Brief psychological interventions such as those used to change a specific relationship process (e.g., Finkel, Slotter, Luchies, Walton, & Gross, 2013) may yield information relatively quickly regarding the linkage between family influence and patient illness management behaviors, while also benefitting patient and family member.

The use of technology to maintain behavior change also is a promising approach. Dyadic interventions often require travel on the part of patients and families, which limits their accessibility. Technology-supported approaches such as Web based programs or mobile phones would reach a broader population of patients and family members than has been possible in the past. Increasing Internet usage across broad segments of the U.S. population offers an especially appealing method for delivering programs to large numbers of patients and families at low cost. Moreover, efficacious Web based interventions for health and illness management could be modified for dyads.

To conclude, close relationships play an important role in health and illness management in ways that researchers are just beginning to understand. Consequently, behavioral interventions for chronic illness are more likely to be beneficial and to yield more sustainable effects if they target both the patient and a close family member. That is, health behavior change interventions focused solely on the patient may have short-term effects, whereas a dyadic approach that targets the influence of close relationships may yield more sustainable effects on patient behavior than has been achieved in the past. Moreover, such dyadic interventions may benefit family members who are ill or are at risk because of poor health behaviors.

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