Young Adults With Type 1 Diabetes: Romantic Relationships and Implications for Well-Being

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ABSTRACT

Objective. The study goal was to examine whether young adults with type 1 diabetes involve romantic partners in their illness, and, if so, how their involvement is related to relationship quality and psychological well-being.

Methods. A total of 68 people (mean age 25.5 years, [SD 3.7 years]) with type 1 diabetes (mean diabetes duration 6 years, [SD 6.7]) involved in a romantic relationship (mean relationship duration 25 months, [SD 27 months]) completed phone interviews. Communal coping (shared illness appraisal and collaborative problem-solving), partner supportive and unsupportive behavior, relationship quality, and psychological well-being were assessed with standardized measures. The study was partly descriptive in identifying the extent of communal coping and specific supportive and unsupportive behaviors and partly correlational in connecting communal coping and supportive or unsupportive behaviors to relationship quality and psychological well-being.

Results. Descriptive findings showed that partners were somewhat involved in diabetes, but communal coping was less common compared to other chronically ill populations. The most common partner supportive behaviors were emotional and instrumental support. The most common partner unsupportive behavior was worry about diabetes. Correlational results showed that communal coping was related to greater partner emotional and instrumental support, but also to greater partner overprotective and controlling behaviors (P <0.01 for all). Communal coping was unrelated to relationship quality or psychological distress. Partner overinvolvement in diabetes management had a mixed relation to outcomes, whereas partner underinvolvement was uniformly related to poor outcomes.

Conclusion. People with type 1 diabetes may benefit from increased partner involvement in illness. This could be facilitated by health care professionals.

Much of the research in the area of diabetes focuses on either children with type 1 diabetes or adults with type 2 diabetes. Although type 1 diabetes is often diagnosed in childhood, 80–85% of those living with type 1 diabetes are adults (1). However, there is much less research on adults with type 1 diabetes compared to children with the disease. As the treatment for type 1 diabetes has improved, adults with type 1 diabetes are living longer and healthier lives (2). Yet, a diagnosis of type 1 diabetes increases one's risk for a multitude of health problems, including hypertension, kidney disease, heart disease, neuropathy, and retinopathy (3). Thus, it is important to understand the factors that influence both the quantity and quality of life of adults with type 1 diabetes.

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One factor that influences the quality of life of an adult with type 1 diabetes is the social environment. The social environment is in a state of flux for young adults and emerging adults with type 1 diabetes. Emerging adulthood is defined as the period of time that occurs after adolescence but before many adult responsibilities, such as marriage, parenthood, and work/career, are assumed (4). Emerging adults face changes in their social environment as they move out of the parental home, pursue vocational opportunities via school and work, and become more seriously involved in romantic relationships. In the case of type 1 diabetes, emerging adults face the additional transition of transfer from pediatric to adult health care services.

Because the majority of young adults with type 1 diabetes were diagnosed with the disease during childhood, they face the challenge of figuring out how to communicate that they have type 1 diabetes to people in these new social environments and whether to involve those people in the management of their diabetes. A key member of the social environment for many young adults with type 1 diabetes is the romantic partner—someone who would need to be made aware of the disease and who may or may not be involved in its management. Thus, this research focuses, through two specific goals, on how young adults with type 1 diabetes involve their partners in the management of their illness and how their partners respond to diabetes.

The first study goal was descriptive. We examined the extent to which young adults with type 1 diabetes involved their partners in disease management by assessing a construct we refer to as "communal coping" and by asking participants the specific ways in which partners make it easier (i.e., support) or more difficult (i.e., conflict) to take care of their diabetes. Communal coping occurs when "one or more individuals perceive a stressor as 'our' problem (a shared appraisal) vs. 'my' or 'your' problem (an individualistic appraisal) and activate a process of shared or collaborative coping" (5). That is, communal coping consists of both a shared appraisal of the problem and collaborative problem-solving. The concept of communal coping recognizes that diabetes affects both patients and partners and that partners affect diabetes (i.e., there is a synergistic interaction between patient and partner). According to the theory, optimal psychological and physical health occurs when a communal coping perspective is adopted (5).

The second goal was to examine the implications of partner involvement in diabetes management for relationship quality and psychological well-being. Research has shown that communal coping is related to positive relationship outcomes and positive health outcomes in the context of chronic illness (6,7), including research in the area of type 2 diabetes (8). These studies, however, have focused on couples whose relationships existed before illness onset; thus, in a sense, the illness "happened to the couple." Because in the case of type 1 diabetes, the illness is more likely to have existed before the romantic relationship, the question remains as to whether communal coping is related to positive relationship and health outcomes among young adults with type 1 diabetes.

In terms of support, there is an extensive body of research showing that both emotional support and instrumental support (i.e., concrete assistance) are related to positive psychological, behavioral, and physical health (9,10), including work in diabetes (11,12). Of the two, emotional support typically shows the strongest relationships to psychological and physical health and is most desired from family, friends, and health care professionals (9,13). By contrast, instrumental support has been linked to behavioral outcomes such as increased exercise (14).

The literature is sparse on the unsupportive or conflictual aspects of social relationships in the area of diabetes. There is some evidence that the unsupportive aspects of relationships are more strongly linked to diabetes outcomes than the supportive aspects of relationships (15,16). Among adults with type 1 diabetes, one can imagine two potential sources of conflict regarding partner involvement in diabetes: overinvolvement and underinvolvement. Overinvolvement can be construed as overprotective or controlling behavior, both of which have been linked to poor outcomes in type 2 diabetes (8). One way in which underinvolvement has been measured is as the partner avoiding illness discussions. Partner avoidance has been linked to poor outcomes in the area of breast cancer (17) but has not been examined in diabetes. It is possible that partner overinvolvement may be more bothersome for males and that partner underinvolvement may be more bothersome for females. This would be consistent with research on sex and self-construal, which suggests that men construe themselves more in terms of individuation and separation from others, whereas women construe themselves more in terms of interdependence and connection with others (18). To the extent that this is the case, overinvolvement threatens men's focus on separation, and underinvolvement threatens women's focus on connection.

Thus, we had four hypotheses about the relationship of partner involvement to patient relationship quality and psychological well-being. First, we predicted that communal coping would be related to increased partner emotional and instrumental support but potentially one source of partner conflict—overinvolvement. If this were the case, it would not be clear whether communal coping would be related to positive psychological well-being. Second, we hypothesized that emotional support would be linked to higher quality relationships and more positive psy-

chological well-being but were less clear about the relation of instrumental support to outcomes. Instrumental support has the potential to reduce distress but also threatens self-efficacy because it implies a need for help. Third, we hypothesized that unsupportive behavior—both controlling and avoidant—would be related to lower quality of relationships and poorer psychological well-being. Fourth, we hypothesized that partner controlling behavior would be more strongly related to poor outcomes for males than for females and that partner avoidance would be more strongly related to poor outcomes for females than for males.

Methods

Procedure

The study was approved by the Carnegie Mellon institutional review board. Participants were recruited from one of two sources. The majority (79%, n = 54) of participants were recruited from online sources such as Reddit and several diabetes blogger sites. The study was advertised as a phone interview aimed at young adults who had type 1 diabetes and were currently involved in a romantic relationship. Participants responded to a posting about the study by emailing the author. The remainder of participants (21%) completed the interview as part of their ongoing participation in the author's longitudinal study of emerging adults with diabetes. There was a subgroup of participants from the longitudinal study that qualified for this study. Of the 18 people in this study who were eligible, 78% (n = 14) agreed.

The study consisted of single 30- to 40-minute phone interviews with people with type 1 diabetes conducted by trained research assistants, as described below. Romantic partners were not interviewed, nor was any information about their demographic characteristics obtained. Participants were compensated with $10 for their time.

Instruments

Communal Coping

Three questions were asked to assess communal coping. The shared-appraisal component was assessed with two items. First, respondents were asked to indicate the extent to which diabetes problems were viewed as shared or one's own problem on a 5-point scale: completely my problem, mostly my problem, both, mostly my partner's problem, completely my partner's problem. Second, participants were asked whose responsibility it is to deal with problems related to diabetes, using the same 5-point scale. Collaboration was assessed with one item; participants were asked to indicate how much they worked together to solve problems related to diabetes on a 5-point scale ranging from 1 = none of the time to 5 = all of the time. The two appraisal items were rescored such that higher numbers reflected shared appraisal—specifically, "both" received the highest score (3), followed by mostly my problem or mostly my partner's problem (2), and completely my problem or completely my partner's problem (1). The three items had a reasonable internal consistency (α = 0.67); thus, they were averaged and combined into a communal coping index.

Respondents were asked whether they were satisfied with their partner's level of involvement in their diabetes using a 5-point scale: 1 = partner is involved way too much (2%), 2 = partner is involved a bit too much (4%), 3 = just right (68%), 4 = I wish partner was involved a bit more (25%), and 5 = I wish partner was involved a lot more (2%). To simplify the analyses, we created three groups of involvement preferences: too involved (prefer less, 6%), involvement just right (68%), and not involved enough (prefer more, 27%).

Supportive and Unsupportive Interactions

Supportive and unsupportive interactions were assessed in two ways. First, two open-ended questions were asked: "In what ways does your partner help you with your diabetes?" and "In what ways does your partner make it more difficult to take care of your diabetes?" Two independent raters coded the responses into categories, and discrepancies were resolved by a third rater. Interrater reliability of the classification categories was evaluated with the Kappa statistic. The reliability for the supportive behaviors was κ = 0.91 and for unsupportive behaviors was κ = 0.81. Because of time constraints in the ongoing longitudinal study (i.e., their interview focused on other issues unrelated to the present study), these questions were only asked of the online sample (n = 54).

A set of close-ended items were administered to assess supportive and unsupportive interactions for all participants. These items were taken from the emotional support scales used by Fekete et al. (19) in their study of adults with type 2 diabetes, the Diabetes Family Behavior Checklist developed by Schafer et al. (20) for people with type 1 diabetes, and the Overprotection Scale developed by Hagedoorn et al. (21) from work focusing on adults with chronic illness. If items were about specific behaviors, they were adapted to reflect general self-care (i.e., "nags about testing blood" changed to "nags about taking care of diabetes") so that respondents could think about any of the self-care behaviors. Participants were asked to indicate the frequency of behaviors on a 4-point scale ranging from 0 = none of the time to 3 = most of the time. Three items measured emotional support (e.g., "My partner understands how I feel about having diabetes," α = 0.690 [19]), and five items measured instrumental support (e.g., "My partner is always ready to help with my diabetes" and "My partner reminds me to test my blood glucose," α = 0.81 [20]). Three aspects of unsupportive social interactions were measured: two items for avoidance (e.g., "My partner avoids talking about diabetes," r = 0.30,

P <0.05 [19]), three items for controlling behavior (e.g., "My partner nags me about not taking care of my diabetes," α = 0.90 [20]), and four items on overprotective behavior (e.g., "My partner tries to do everything related to my diabetes for me," α = 0.72 [21]).

Relationship Quality

Relationship quality was assessed with the 5-item Quality of Marriage Index (α = 0.90 [22]), which was easily adapted for dating relationships (e.g., "We have a good marriage" was changed to "We have a good relationship"), and the 6-item emotional intimacy scale from the Personal Assessment of Intimate Relationships (e.g., "My partner listens to me when I need someone to talk to," α = 0.74, [23]). Because the two scales were highly correlated (r = 0.75, P<0.001), we standardized the two scales and took the average to form a composite relationship quality index.

Psychological Well-Being

Psychological well-being was assessed with the Center for Epidemiologic Depression Scale (α = 0.89 [24]), the Life Satisfaction Scale (α = 0.90 [25]), and the abbreviated 5-item Perceived Stress Scale (α = 0.81 [26]). Because these three scales were highly related (r ranged from 0.71 to 0.72, P<0.001), we standardized the scales and took the average to form a composite psychological distress index. Because life satisfaction is scored such that a higher number means greater satisfaction, we reverse-coded this item (i.e., 1=7 and 7=1) before combining the three scales into a distress index.

Overview of the Analyses

First, we examined whether there were differences in key variables by relationship status (i.e., married, living together, or dating), with one-way analyses of variance (ANOVA) and then by recruitment source with independent t tests. We also examined whether any other demographic variables (i.e., age, sex, or length of relationship) were related to key study variables. Second, the descriptive aspect of the study was addressed by providing the frequencies of responses to the three communal coping questions and by providing frequencies of the common supportive and unsupportive partner behaviors. Third, the correlational aspect of the study was addressed by examining the correlation of the communal coping index to support, relationship quality, and psychological well-being.

The communal coping index and instrumental support were normally distributed, but several other social interaction variables were not. Emotional support was negatively skewed, and the three unsupportive interaction indices were positively skewed. Because transformed variables did not alter the findings reported below, we present the results with the original untransformed variables so that mean levels can be interpreted from the original scales.

We then examined the relationship of partner involvement to support, relationship quality, and psychological well-being with one-way ANOVA. We created three involvement groups: too involved, involved just right, and not involved enough. Finally, we conducted correlations of supportive and unsupportive interactions to relationship quality and psychological well-being and examined whether sex moderated the relationships of avoidance and controlling behavior to relationship quality and psychological well-being with regression analyses.

Results

Participants

Participants included 68 young adults with type 1 diabetes, aged 18–36 years, who were currently involved in a romantic relationship. Participants had to have been diagnosed with diabetes before the start of the romantic relationship. Descriptive statistics regarding the sample are provided in Table 1. We did not collect any information about the partners' demographic characteristics.

Relationship Status, Recruitment Source, and Other Demographic Comparisons

There were no relationship status (i.e., married, living together, or dating)

TABLE 1. Demographics of the Sample (n = 68)

Characteristic	Percentage or Mean (SD)
Sex	
Female	59
Male	41
Race	
White	94
Asian	3
African American	1
White/African American	1
Hispanic ethnicity	3
Relationship status	
Married	21
Living together	27
Dating	53
Age (years)	25.52 (3.74)
Relationship duration (months)	25.16 (26.86)
Age at diagnosis (years)	9.10 (5.46)
Diabetes duration (years)	16.42 (6.69)

differences in communal coping, support, or psychological distress. There was a relationship status difference in relationship quality (F [2, 65] = 4.42, P <0.05), such that those who were married (mean 6.79) or living together (mean 6.61) reported higher relationship quality than those who were dating (mean 6.16), according to Fisher's least significant difference post-hoc comparison test.

We compared the two recruitment sources with regard to all major study variables. Importantly, there were no recruitment source differences in relationship quality or psychological distress. However, people recruited online reported lower communal coping scores (P <0.01) and lower rates of overprotective behavior (P <0.01) than those recruited through the ongoing study.

Neither age nor length of relationship was related to communal coping, support, relationship quality, or psychological distress. Sex differences were apparent on only one variable: relationship quality, such that females reported higher-quality relationships (mean 0.21, [SD 0.86]) than males (mean −0.31, [SD 0.97]). Diabetes duration was only related to one variable: those who had diabetes for a longer period of time reported greater communal coping (r = 0.25, P <0.05).

Partner Involvement in Diabetes

Communal Coping

Responses to the three communal coping items are shown in Table 2. In terms of how diabetes is viewed, the majority of respondents said it was viewed as mostly their own problem, with the remainder split between completely their own problem and shared. Two people said that it was mostly their partner's problem. It is not clear whether those two respondents misunderstood the question or whether they were indicating that their partners have more difficulties with diabetes than they do. However, when asked whose responsibility it was to deal with diabetes when problems arose, respondents were evenly divided between it being completely their own responsibility and mostly their own responsibility. Only 10% believed that the responsibility was shared. A paired t test comparison of these two items revealed a significant difference (t [67] = 3.65, P <0.001), indicating that respondents see diabetes problems as somewhat shared but view the management of diabetes as mostly their own responsibility. In terms of collaboration on diabetes problems, the mean score was 3, which indicated that couples worked together on average "some of the time."

TABLE 2. Frequencies of Items Assessing Communal Coping and Partners' Helpful and Unhelpful Behaviors

Item	Percentage
Communal Coping #1: Whose problem is it?	
Completely my problem	18
Mostly my problem	65
Both of our problem	15
Mostly my partner's problem	3
Completely my partner's problem	0
Communal Coping #2: Whose responsibility is it?	
Completely my responsibility	41
Mostly my responsibility	49
Both of our responsibility	10
Mostly my partner's responsibility	0
Completely my partner's responsibility	0
Communal Coping #3: How much do you work together?	
None of the time	9
A little of the time	18
Some of the time	29
Most of the time	34
All of the time	10
How is your partner helpful?	
Emotional support (listening, understanding)	43
Instrumental support (concrete assistance with diabetes)	29
Specific assistance with low blood sugar	25
Reminding me to do things (test, see doctor)	18
How is your partner unhelpful?	
Partner worries/gets distressed about diabetes	31
Makes it difficult to eat healthy (buys unhealthy food)	16
Lacks emotional support (doesn't understand, insensitive)	13
Mere presence keeps me from taking care of myself	7
Nags me to do what I'm supposed to do	7
Argues about how I should best take care of myself	7
Scheduling issues (e.g., don't eat at the same time)	7

Supportive and Unsupportive Interactions

When asked how partners help with diabetes, the primary response was emotional support, which largely took the form of listening to problems and providing encouragement (Table 2). Different forms of instrumental sup-

TABLE 3. Involvement Preference Group ANOVA With Regard to Support and Well-Being

	Involvement			*P*
	Too Much	Just Right	Not Enough	
Communal coping	3.08[a]	2.23[b]	2.24[b]	<0.05
Emotional support	2.83a[b]	2.72[a]	2.32[b]	<0.01
Instrumental support	2.40[a]	1.30[b]	1.2[2b]	<0.001
Avoidance	0.13[ab]	0.10[a]	0.39[b]	<0.05
Overprotection	1.56[a]	0.61[b]	0.47[b]	<0.01
Controlling	1.42[a]	0.57[b]	0.50[b]	<0.10
Relationship quality	0.82[a]	0.02[ab]	–0.23[b]	NS
Psychological distress	0.86[a]	–0.22[b]	0.37[a]	<0.01

[a,ab,b]Looking at the three means within a row, those that have the same superscript letters do not significantly differ from each other at P <0.05. NS, not significant.

port also were prominent. General instrumental support took the form of carrying snacks and supplies, picking up prescriptions, and cooking. A specific form of instrumental support that was identified was assistance with low blood glucose levels.

In terms of unsupportive interactions, the primary issue identified was that partners were worried or distressed about diabetes. This worry then became a source of concern for the person with diabetes. Two other prominent responses were that partners sometimes made it difficult to eat healthy (e.g., buying unhealthy food [16%]) and a lack of emotional support (e.g., failing to understand or being insensitive [13%]).

Relationships Between Communal Coping and Support, Relationship Quality, and Psychological Well-Being

The communal coping index was related to reports of greater emotional support (r = 0.35, P <0.01), greater instrumental support (r = 0.69, P <0.001), and marginally less avoidance (r = –0.22, P <0.10). However, communal coping was also related to more controlling (r = 0.45, P <0.001) and overprotective behavior (r = 0.54, P <0.001). Communal coping was not related to the relationship quality index or to psychological distress.

Relationships Between Partner Involvement and Support, Relationship Quality, and Psychological Well-Being

We examined the connections between the three involvement preference groups (too much, just right, and not enough) to support, relationship quality, and psychological well-being with one-way ANOVA. The least significant difference post-hoc comparison test was used to examine the nature of any significant group differences that emerged.

As shown in Table 3, participants who said their partners were involved too much scored higher on communal coping than the other two groups. Participants who said their partners were involved too much also reported receiving greater instrumental support, greater overprotective behavior, and greater controlling behavior than the other two groups. Participants who reported that their partners were not involved enough reported receiving less emotional support from partners and greater partner avoidance compared to participants who were satisfied with their partner's level of involvement.

There were no overall group differences in relationship quality, but post-hoc comparison tests revealed higher relationship quality among those whose partners were described as too involved compared to not involved enough.

Participants who said their partners were involved just the right amount reported lower levels of psychological distress than participants whose partners were too involved or not involved enough.

Relations of Supportive and Unsupportive Social Interactions to Relationship Quality and Psychological Well-Being

These correlations are shown in Table 4. Emotional support and instrumental support were related to higher relationship quality. Avoidance was related to lower relationship quality. Controlling and overprotective behaviors were not related to relationship quality.

Emotional support was related to less psychological distress. Instrumental support was unrelated to psychological distress. Avoidance and controlling behaviors were both related to more psychological distress. Overprotective behavior was unrelated to psychological distress.

We examined whether there were sex differences in the relationships between controlling and avoidant behaviors and relationship quality and psychological distress with regression analysis. We entered the interaction between sex and each of these two behaviors into a regression analysis following entry of main effects. We predicted that females would be more bothered by avoidance and males would be more bothered by controlling behavior. For relationship quality, we found an interaction between sex and controlling behavior (β = 0.79, P <0.05), such that controlling behavior was related to lower relationship quality for males but not females. We found an interaction between sex and avoidance for psychological distress (β = 0.72, P <0.05), such that avoidance was related to more psychological distress for females but not males.

TABLE 4. Relationships Between Supportive and Unsupportive Interactions and Relationship Quality and Psychological Well-Being

	Relationship Quality	Psychological Distress
Emotional support	0.47**	–0.24*
Instrumental support	0.24*	0.15
Avoidance	–0.46**	0.25*
Overprotection	0.12	0.17
Controlling	–0.05	0.31*

*P <0.05, **P <0.001.

Discussion

Partners' Involvement in Diabetes

The first study goal was to examine the extent to which emerging adults with diabetes involved their partners in their illness and to articulate the ways in which these partners were or were not helpful. Interestingly, only 15% of participants reported that diabetes was a shared problem, and only 10% of participants reported that diabetes was a shared responsibility.

When chronic illness is diagnosed in adulthood, after relationships are already established, more communal appraisals of an illness may occur compared to those found in the present study. In a study of adults with type 2 diabetes, when couples were given the choice as to whether they considered diabetes to be the patient's problem or a shared problem, 67% of couples said that it was a shared problem (8). However, couples were interviewed jointly when asked this question. In a study in which only the patient with type 2 diabetes was asked about communal coping, 30% reported that diabetes was a shared problem (27).

The lower levels of communal coping in this sample (and perhaps this population) may have important implications for partner involvement in diabetes management. Interestingly, respondents were more likely to perceive the problem as shared than the responsibility as shared. This finding suggests that young adults with diabetes recognize that diabetes and its associated difficulties affect both people in the relationship, but they perceive that it is their own responsibility to deal with those problems.

It would be useful for future research in this area to learn more about the specific problems that people with type 1 diabetes share with their partner. Do people with diabetes involve their partners in the self-care behaviors needed to manage the disease (e.g., monitoring diet or checking blood glucose), or do they involve their partners in assisting with problems that arise related to diabetes (e.g., treatment of low blood glucose levels), or both?

The primary way in which partners were helpful with regard to diabetes was the provision of support—both emotional support and instrumental support. Emotional support was the more prominent helpful behavior, which is consistent with literature that has shown emotional support to be the most beneficial aspect of relationships in general (13), as well as relationships in the context of diabetes (28). A study of children and adolescents with type 1 diabetes revealed that instrumental support was desired from parents, whereas emotional support was desired from peers (28). Romantic partners are more like peers than parents in terms of status, but more like adults than childhood peers in terms of maturity. Thus, it is not surprising that the second and third most frequent responses were indicators of instrumental support—assistance with diabetes-related tasks. Thus, romantic partners may begin to fill the role of instrumental support provider.

Several kinds of unhelpful social interactions were articulated. The most prominent one involved partner distress. Thus, the most unhelpful aspect of social interactions with partners was not something partners actively did, but rather something participants inferred. People with diabetes seem to be acutely aware that their illness is a source of distress for their partners, which may impair partners' ability to provide support, as well as the willingness of people with diabetes to request support. Participants also identified several concrete ways in which their partners were unhelpful (e.g., making it difficult for the participant to make healthy food choices by purchasing or eating unhealthy food in their presence). Partners also behaved in ways that were insensitive or showed a lack of understanding—in essence, failing to provide emotional support. One person reported that the partner induced feelings of guilt for having diabetes, even if it was in a joking way, and others noted that it was difficult for partners to understand diabetes.

Implications of Partner Involvement for Relationships and Well-Being

We examined whether couples who had a communal coping approach to the illness would have better outcomes. The findings for this hypothesis were equivocal. Those who scored higher on communal coping reported receiving more support from partners, but also that partners engaged in more controlling and overprotective behaviors. This may be a cost of a communal-coping approach to illness. When couples approach the illness communally, they benefit from the support provided by partners, but also have to endure partners being overinvolved in the illness.

Participants who reported that partners were too involved in the illness scored higher on communal coping than participants who were satisfied with their partners' level of involvement or participants who desired greater partner involvement. These mixed findings for communal coping may explain why communal coping was unrelated to relationship quality and psychological distress.

One caveat with respect to these findings regarding communal coping is that the three items were framed in reference to "problems"—that is, how couples coped when there were diabetes problems. Thus, this communal coping measure may partly be tapping the mere existence of problems. Future research should ask couples how they cope with the illness more generally rather than limit the context to problems.

Supportive and unsupportive interactions revealed links to relationship outcomes and psychological well-being. Emotional support revealed the most robust positive relationships. People who reported receiving more emotional support from their partners reported higher-quality relationships and lower levels of psychological distress. By contrast, instrumental support—concrete assistance—was related to relationship quality but not to the psychological distress index.

Receiving help with diabetes may be a double-edged sword. On one hand, if assistance is needed, it is crucial that partners are able to provide help. On the other hand, the fact that help is provided indicates that there was a need for help. Thus, receipt of instrumental support may signify situations in which there are greater problems with diabetes care. Individuals also may vary in their desire for instrumental support from partners, whereas desires for emotional support are more likely to be uniform. Receipt of instrumental support could undermine feelings of competence and threaten independence. Some previous studies have linked receipt of instrumental support to increased, rather than decreased, distress (29).

We examined two categories of unsupportive interactions: overinvolvement and underinvolvement. A small group of participants reported that their partners were too involved in their diabetes. This group received greater support from partners and had higher relationship quality, but also reported greater controlling and overprotective behaviors on the part of their partners. Partners' controlling and overprotective behaviors were unrelated to relationship quality, but their controlling behavior was linked to increased distress. The overinvolvement group scored highest on communal coping, but also reported the highest levels of psychological distress. Again, it is not clear whether partner overinvolvement in diabetes is a precursor to problems or a response to diabetes-related problems. Only longitudinal research can disentangle this relationship. These findings regarding partner overinvolvement must be viewed with caution because a very small percentage of participants viewed their partners as overly involved in their diabetes.

By contrast, partner underinvolvement in diabetes was clearly linked to poor outcomes. A sizeable minority of individuals reported that they would prefer their partners to be more involved in their diabetes than they actually are. This group of individuals reported more problematic relationships and higher levels of distress. Avoidance was the interaction behavior that reflected underinvolvement. Partner avoidance was linked to poor relationship quality and increased distress.

There was evidence that the conflictual interactions had differing relationships to outcomes as a function of participant sex. Partner avoidance was more strongly related to psychological distress among females than males, and partner controlling behavior was more strongly related to lower relationship quality for males than females. These findings are consistent with literature on the demand/withdraw pattern (30). Not only are females more likely to engage in demanding behavior and males more likely to engage in withdrawal behavior, but there also is some evidence that partner demanding behavior is not as bothersome as withdrawal behavior for females (31). Females may prefer partners to be involved in some way—even if it is controlling—than to not be involved at all. Males, by contrast, may find partner controlling behavior to threaten their sense of autonomy, which is central to the male sex role. Rather than comparing males and females, future research should examine people's sex-related self-construals (18) to determine whether more agentic/independent people are threatened by controlling behavior and more communal/interdependent people are threatened by avoidant behavior.

Limitations

There were several limitations to this study. First, as mentioned previously, the study was correlational, so cause and effect could not be determined in the relationships between degree of partner involvement in diabetes and psychological well-being. Second, we did not have partner reports to corroborate or refute participants' reports of relationships. Third, this was a select sample, in that the vast majority of people in the study chose to respond to an online posting. Thus, this study is more likely to represent individuals who are involved in happier relationships. In addition, a portion of this sample was participating in another study. Although that study was not an intervention, it is unclear how their participation in the other study could have influenced the responses to this study. These limitations are viewed in perspective, however, given the dearth of research on young adults with type 1 diabetes.

Conclusion

Previous research has focused on type 1 diabetes in children and type

2 diabetes in adults and neglected the fact that children with type 1 diabetes grow up to be adults. This study showed that the majority of participating young adults with type 1 diabetes do not view diabetes as a shared problem, but that their partners are involved in diabetes in some way. In some couples, partners are overinvolved in the illness, provide a lot of support, but engage in controlling behavior; in others couples, partners are underinvolved in the illness, provide less support than desired, and avoid illness discussions. Whereas partner overinvolvement revealed mixed relationships to outcomes, partner underinvolvement was uniformly linked to poor outcomes.

These findings suggest that future research and clinical care should be aimed at increasing partners' involvement in type 1 diabetes, with the caveat that patient preferences should be taken into consideration. Health care professionals should involve partners in diabetes discussions to facilitate patient-partner communication. The key is to involve partners in the management of diabetes without increasing partner burden because partner distress is a primary concern of patients. To the extent that partners are more knowledgeable about the disease, they can be more helpful to patients, and patients may be less worried about partner distress.

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Duality of Interest

No potential conflicts of interest relevant to this article were reported.

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