Brief report: Benefit finding and identity processes in type 1 diabetes: Prospective associations throughout adolescence

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ABSTRACT

Identity formation constitutes a core developmental task during adolescence, but may be challenged when having a chronic illness such as type 1 diabetes. The present study examined whether viewing positive benefits to one's diabetes across adolescence was related to greater identity exploration and commitment later in time. A total of 55 adolescents (10—14 years; 47% female) with type 1 diabetes participated in a six-wave study spanning 3 years (with six-month measurement intervals). Through latent growth curve modeling, Time 6 identity scores were regressed on intercept and slope terms of benefit finding through Times 1—4, simultaneously controlling for demographic and clinical variables. Identity exploration (but not commitment) at Time 6 was positively predicted by the intercept and slope of benefit finding: adolescents who find benefits in diabetes are more inclined to explore different alternatives later on in adolescence. Benefit finding may constitute a resource facilitating identity formation in adolescents with diabetes.

Engaging in identity exploration enables adolescents to prepare themselves for committing to adult social roles (Kroger & Marcia, 2011). Previous research has demonstrated that adolescents with type 1 diabetes engage less in exploration compared to their peers (Luyckx et al., 2008). The chronicity of type 1 diabetes coupled with the intensive daily management (monitoring of blood glucose levels, insulin administration, diet, exercise) may interfere with identity-related work. Adolescents with diabetes may be less inclined to explore alternatives because of perceived restrictions on future possibilities due to their illness (Seiffge-Krenke, 2001). However, identity processes may be facilitated if adolescents can find meaning in diabetes, viewing the illness as consistent with personal growth. If adolescents can see benefits to the experience of diabetes, exploration and commitment may indeed be fostered.

Benefit finding refers to individual differences in perceiving positive life changes resulting from adversity and negative life stressors (Aspinwall & Tedeschi, 2010; Helgeson, Reynolds, & Tomich, 2006). Such positive changes may manifest themselves in having a more meaningful worldview or positive view of the self and feeling strengthened as a person (Tedeschi & Calhoun, 2004). Besides constituting a resource for adapting to adversity, some argue benefit finding is primarily a cognitive defense

mechanism to cope with negative emotions. People may experience benefit finding as a result of chronic illness such as diabetes as well (Tran, Wiebe, Fortenberry, Butler, & Berg, 2011). Experiencing benefit finding in the context of diabetes may enable adolescents to feel strengthened in tackling the normative identity task. The present secondary analysis of a six-wave longitudinal study examined how finding benefits across adolescence related to identity exploration and commitment later in time.

Adolescents with diabetes who experience benefit finding over time as a result of their illness may feel strengthened in exploring alternatives later on in adolescence. Given that identity exploration – and not commitment – has been found to be affected by type 1 diabetes (Luyckx et al., 2008; Seiffge-Krenke, 2001), we expected benefit finding to be associated especially with exploration. Adolescents experiencing benefit finding may perceive fewer restrictions on their future due to their illness and feel more competent in exploring alternatives. A new sense of purpose may emerge through benefit finding, which may lead to an active engagement in exploring and developing an identity. Benefit finding has been related to less depressive symptoms and better coping strategies and treatment adherence in adolescents with diabetes (Tran et al., 2011). However, the value of benefit finding toward identity remains to be investigated.

In sum, experiencing benefit finding throughout adolescence was hypothesized to function as a resource for engaging in identity exploration for individuals with type 1 diabetes. In examining these associations, we controlled for demographic (age, gender), diabetes-related factors (illness duration, insulin administration via pump vs. injections, glycemic control-values), and depressive symptoms at baseline, as these variables have been related to identity and self-related variables (Luyckx et al., 2008; Seiffge-Krenke, 2001; Tran et al., 2011).

Methods

Participants and procedure

Fifty-five adolescents with Type 1 diabetes (47% female; 93% Caucasian) ages 10–14 ($M = 13.49$, $SD = 1.46$) participated in a 6-wave longitudinal study spanning 3 years. Six-month time intervals were chosen to capture dynamic changes over time. At T(ime)1, mean illness duration was 5.08 years ($SD = 3.02$) and 55% used an insulin pump. This sample came from a larger study of 252 adolescents, and is comprised of participants who completed the identity measure at T6 (one year after T4). This sample did not differ from the larger sample on sex, ethnicity, illness duration, pump status, or glycemic control at T1, but was older compared to the larger sample ($M = 12.21$, $SD = 1.43$) ($F(250) = .29$, $p < .001$), as older adolescents were targeted for the identity measure. The study was IRB approved. Parents gave written informed consent and adolescents gave written assent (see Tran et al., 2011).

Measures

Benefit finding
At T1 through T4, adolescents completed a 15-item measure of benefit finding (Tomich & Helgeson, 2004). A sample item is: "Having diabetes has led me to be more accepting of things" on a 5-point scale from 1 (not at all) to 5 (extremely). Internal consistency was good at all times ($\alpha = .89$–.94).

Identity processes
At T6, adolescents completed the Ego Identity Process Questionnaire (Balistreri, Busch-Rossnagel, & Geisinger, 1995), assessing commitment (16 items; $\alpha = .77$) and exploration (16 items; $\alpha = .68$). Sample items are: "I don't expect to change my political principles and ideals" (commitment) and "I have consistently reexamined many different values in order to find the ones which are best for me" (exploration) using a 6-point Likert scale from 1 (not true of me) to 6 (exactly true of me).

Depressive symptoms
At T1, adolescents completed the Children's Depression Inventory (CDI; Kovacs, 1985). This 27-item measure indicated the extent to which adolescents experienced depressive symptoms during the past two weeks ($\alpha = .84$).

Results

Latent Growth Curve Modeling (LGCM) in MPLUS 6 was used to examine how intercept and linear slope of benefit finding at T1-4 predicted exploration and commitment at T6. The path from the linear slope to benefit finding T1 was fixed to 0. Subsequent linear slope pattern coefficients were fixed at 1, 2, and 3 for T2, T3, and T4. For our 55 participants, a non-significant Little's (1988) MCAR test ($\chi^2(33) = 27.39$, ns) indicated that missing values could be reliably dealt with using FIML. To examine the unique predictive value of benefit finding, exploration and commitment at T6 were regressed on the intercept and slope of benefit finding when simultaneously regressing the identity variables on sex, age, illness duration, pump status (insulin injections vs. pump), glycemic control (with higher HbA_{1c}-values pointing to poorer glycemic control), and depressive symptoms at T1. LGCM was accompanied by good model fit ($\chi^2(21) = 27.20$ ($p = .16$), RMSEA = .073, SRMR = .054, CFI = .940) (Kline, 2006). For benefit finding, mean intercept was 3.043 ($p < .001$) and mean slope was −.036 (ns), pointing to no significant mean-level change over time; variances were .490 ($p < .001$) and .037 ($p < .10$), respectively,