The relation of parental support of emerging adults' goals to well-being over time:

The mediating roles of goal progress and autonomy need satisfaction.

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PARENTAL SUPPORT OF EMERGING ADULTS' GOALS

Abstract

Two studies examined parental support of young adults' personal goals. Study 1 examined 1189 personal goals reported by 238 young adults and showed that it was common for emerging adults to receive support from their parents as they pursued their personal goals, particularly important and demanding goals. Relying on parents was unrelated to the Big 5 traits, but was linked with developmental factors – younger age, autonomy supportive family environment, and higher identity development but less intimacy development. Study 2 used a prospective, longitudinal design (n = 932) to show that goal support from parents was significantly associated with better well-being across the school year, as long as the support was delivered in an autonomy supportive fashion (e.g., empathic and encouraging volitional functioning). Goal support from peers was unrelated to well-being. Mediation analyses showed that parental autonomy support indirectly influenced young adults' subjective well-being over the year by enhancing their progress on personal goals and boosting their sense of personal autonomy in their everyday lives. These studies highlight that the psychological impacts of goal support depend on both the source and type of support that is received

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The relation of parental support of emerging adults' goals to well-being over time:

The mediating roles of goal progress and autonomy need satisfaction.

Emerging adulthood has been proposed as a distinct developmental period between 18 and 25 years of age, during which individuals have the opportunity to explore various life possibilities (Arnett, 2000). It is a period of life when young people establish an identity, experiment with intimacy, form stable intimate relationships, and make career decisions (Salmela-Aro, 2010). Emerging adulthood has been described as the most volitional stage of life because the transitions common in this period require personal effort in the form of goal selection, goal pursuit, and goal adjustments (Schulman & Nurmi 2010). Emerging adults' success in pursuing goals related to education, career, and relationships have been shown to be linked to well-being and healthy development in longitudinal studies (Messersmith & Schulenberg, 2010).

Although the pursuit of personal goals is highlighted during emerging adulthood, such pursuit is not regulated entirely independently of others. For example, when high school students are asked to state which people are most closely tied to their educational goals, they list their parents first (Salmelo-Aro & Little, 2007). Social support researchers have highlighted that close relationships promote optimal development not only by helping individuals to cope successfully with life's adversities, but also by supporting individuals as they pursue opportunities for growth and development (Feeney & Collins, 2015). There is considerable evidence that growth-oriented social support benefits individuals in their goal pursuits (Brunstein, Dangelmayer, & Schultheiss, 1996; Feeney, 2004; Rusbult, Finkel, & Kumashiro, 2009).

Parental involvement in the pursuit of personal goals of emerging adults is complicated by the shifting relationships with parents that characterize this developmental period. Emerging

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adulthood involves a re-evaluation of the parent-child relationship, primarily in regard to autonomy (Bartle-Haring, Brucker, & Hock, 2002). It is thought to be important that parents acknowledge and accept their child's growing capacities to select and pursue their own personal goals. Parental displays of trust, and the affordance of increased privacy, assists the emerging adult in forming a strong sense of identity and exploration at a time when it is most crucial (Bartle-Haring et al, 2002). The changing parental relationships can be challenging, however, there is a continuing need for support from parents, but this support is in a less dependent form than that of younger adolescents (Bartle-Haring et al, 2002). The way in which parents adapt to their emerging adult children's attempts to individuate is thought to be critical to their offspring's transition to adulthood (Arnett, 2000). The degree to which emerging adults rely on the support of parents versus peers, and the degree to which such support is associated with goal progress, need satisfaction, and well-being are important open questions.

We suggest that self-determination theory (SDT, Ryan & Deci, 2017) provides a useful framework for understanding the way in which parents can support the goal strivings of emerging adults, and how need support facilitates more general well-being. Research indicates that family environments which support autonomy (that is, personal choice, volition, and self-endorsement) are associated with positive developmental outcomes (Ryan & Deci 2017). While some confusion exists between the concepts of autonomy and independence, and there is some dispute over the need for separation, SDT views autonomy as conceptually orthogonal from independence. With regards to parent-child relationships, SDT research has shown that parental autonomy support is what young people require for optimal development, and that a focus on independence (i.e., not relying on others for support or guidance) may thwart such development (Soenens et al., 2007).

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Self-Determination theory proposes that motivation for any behavior varies in the degree to which it is experienced as autonomous or controlled in nature (Ryan & Deci, 2000; 2012). Individuals are considered autonomously motivated to the extent that they experience goals and decisions to be self-generated and freely chosen, rather than controlled by external or internal pressures. Support for autonomy establishes the environment for the development of volition by allowing intrinsic motivation to thrive and/or by facilitating the integration of previously external motives into the developing self (Ryan & Deci, 2000). Specific behavioral indicators of autonomy support include acknowledging an individual's feelings and unique perspective, refraining from excessive control and pressure, and encouraging choices and options (Koestner, et al., 1984; Reeve & Yang, 2009). Autonomy is one of three basic needs suggested by SDT, the others being relatedness and competence, and satisfaction of these basic needs is considered fundamental to the experience of general subjective well-being. The thwarting of these needs is thought to lead to personal and interpersonal dysfunction and a general diminution of well-being (Ryan & Deci, 2017).

The present research explores the degree to which emerging adults rely on their parents for support as they pursue their personal goals. We examine the extent to which it is normative for parents to help their late adolescent and young adult children with their personal goals. However, we expect that the quality of the support provided by parents will moderate the extent to which parental support is associated with beneficial outcomes. In particular, we plan to distinguish autonomy support of goals from directive forms of support.

Recent goal research has identified important differences between autonomy support and more directive forms of support from significant others. While autonomy support is conceptualized as being responsive and empathic, directive support is active and instrumental.

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An autonomy support item is “the support provider listens to how I feel about my goal” whereas a directive support item is “the support provider helps me problem solve about my goal.” In one study, university student participants reported significantly greater weight loss over time when they perceived their family and friends as autonomy supportive of their goal efforts; however, no such association was found for directive support (Powers et al., 2008). Another study showed that autonomy support from relationship partners predicted weight loss over an 18-month period in the context of a randomized controlled study of overweight community adults (Gorin et al., 2013). In contrast, directive support of healthy eating by friends and partners was significantly negatively related to weight loss. Three other studies with university students demonstrated that autonomy support was consistently and significantly associated with better goal progress across a variety of goal domains, while directive support was only marginally associated with better goal progress (Koestner et al., 2012). Together, these studies suggest that autonomy support is more beneficial for goal pursuit than directive support, however, none of the previous studies have examined whether the effects of autonomous and directive support for goals depend on the source of the support (i.e., friends, parents, siblings, romantic partners). Given that parent-child relationships are more hierarchical than peer relationships, we expect that it is in the context of parental goal support (rather than peer support, for example) that the distinction between autonomous and directive forms of support will be especially important. The overarching issue is whether parental support of goals will be interpreted by the young adults as promoting the satisfaction of their needs for developmentally appropriate autonomy, competence and relatedness, as opposed to thwarting these needs.

Present Investigation

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The goal of the present research was to examine the role played by parents in the personal goal pursuits of emerging adults. In study 1 we focus on establishing the extent to which relying on parents for goal support is normative and adaptive. We planned to determine the frequency with which emerging adults receive support from their parents and to determine the contexts in which such reliance occurs. We expected that emerging adults would be likely to receive parental support for more important, difficult, and motivationally strenuous goals. Such goals require more self-control resources and thus young people might be expected to welcome “outsourcing” some of the self-regulatory demands to their parents. Furthermore, we sought to understand whether such reliance is associated with specific developmental (e.g., age, identity stage) and personality factors (e.g., big five traits) of the young people.

Study 2 used a 6-wave prospective longitudinal design that spanned a full school year to examine the impact of parental autonomy support (versus directive support) on emerging adults' goal progress, psychological need satisfaction in everyday life, and subjective well-being. The effects of parental goal support were compared with those of peer goal support. We hypothesized that because issues of autonomy are highlighted in the relationship between parents and emerging adults the distinction between autonomous goal support and directive goal support will be amplified. Specifically, we expected autonomy support for personal goals from parents (rather than friends) to have especially positive effects on participants' goal progress, autonomous need satisfaction, and subjective well-being.

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Study 1

Study 1 examined the extent to which emerging adults relied on their parents to support their goals. Specifically, university students were asked at the beginning of the school year to list three personal goals they had for the upcoming semester. They were also asked to list two long-term developmental goals. For each goal selected, participants were asked to rate the goal's importance and demandingness, as well as their own motivation for pursuing the goal. They were also told:

“Other people often support us in our goal pursuits. Please name the person most likely to provide you with support as you pursue this goal. Please also indicate the person's relationship to you.”

The listed relationships were coded into the following categories: friend, romantic partner, mother, father, sibling, other family member (e.g. aunt, grandfather), or mentor (professor, manager at work).

Participants also completed scales assessing personality and developmental factors that might influence goal support. We expected to find that the majority of participants would report relying on parents for goal support on more important and difficult goals. We were curious to see whether relying on parents was associated with developmental factors such as age and life-stage development, as well as on the Big 5 traits.¹

Method

Participants

Two hundred and thirty-eight University students participated in the study. The sample was composed of 183 women and 55 men whose ages ranged from 18 to 30 with a mean of 20.25. The ethnic/cultural background of our sample was predominantly White and North American (79%) but included 15% Asians, 2 % African Americans, .2 % Hispanics and 2 %

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Middle Eastern. The study was described as an investigation into university students' goal pursuits. During the one-hour lab session, participants completed a questionnaire about their goals as well as various measures of personality.²

Measures

Goals. Participants were asked to list three semester-long goals with the following instructions:

“People often have personal goals. In this section, please write down three personal hopes, plans, and goals you have for the coming semester. Personal goals are projects and concerns that people think about, plan for, carry out, and sometimes (though not always) complete or succeed at. They may be more or less difficult to implement; require only a few or a complex sequence of steps; represent different areas of a person's life; and be more or less time consuming, attractive, or urgent.”

Participants were asked to list two personal, long-term goals with the following instructions:

“People often have long-term goals. In this section, please write down your two most important personal hopes, plans, and goals for the next 3-5 years. Personal goals are projects and concerns that people think about, plan for, carry out, and sometimes (though not always) complete or succeed at. They may be more or less difficult to implement; require only a few or a complex sequence of steps; represent different areas of a person's life; and be more or less time consuming, attractive, or urgent.”

Examples of semester goals listed by participants include “get A's in all my courses,” “fall in love”, “diminish my time on Facebook” “make new friends”, and “pay my debts.”

Examples of developmental goals include: “develop a clear idea of my career path,” and “have a meaningful romantic relationship.”

Goal Importance was rated with three items. Specifically participants were asked about how important the goal was, how committed they were to the goal, how hard they intended to work toward the goal. The internal reliability among the items was $\alpha = .76$.

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Goal Feasibility. Participants rated the feasibility of each goal by answering one question about the goal's perceived difficulty ("How challenging do you think it will be to attain this goal?") and a question about the participant's perceived skills and resources ("To what extent do you feel you have the skills and resources necessary to attain this goal?") (Holding et al., 2017). All responses were made on a 7-point scale of 1 (*not at all*) to 7 (*extremely*). Feasibility was calculated as the difference between ratings of skill and difficulty, such that higher numbers represented more skill and less difficulty, and numbers below zero represented more difficulty than skill.

Goal Motivation. Participants were asked to rate their motivation for pursuing each goal at T1 using five items that assessed external, introjected, identified, integrated and intrinsic reasons for goal pursuit (Sheldon & Kasser, 1998). Self-determination theory highlights that there is a continuum of autonomy that underlies individuals' perceived locus of causality judgments (Ryan & Deci, 2017). All responses were made on a 7-point scale of 1 (*not at all for this reason*) to 7 (*completely for this reason*). As in previous research, an index of relative autonomy was calculated as the mean of intrinsic, integrated and, identified ratings, minus the mean of external and introjected regulation (Koestner et al., 2008). The internal reliability for the relative autonomy index (after reversing external regulation and introjection) was $\alpha = .63$.

Big-Five Inventory. To measure personality traits we administered the 44-item Big-Five Inventory (BFI) (John & Srivastava, 1999) which is a widely-used, reliable and valid measure of the Big Five. The BFI utilizes 44 short phrases based in the trait adjectives known to be prototypical of the Big Five to capture individual differences. Participants rated phrases such as "I am someone who worries a lot" (neuroticism) and "I am someone who tends to be disorganized" (conscientiousness, reversed) on a 5-point Likert scale ranging from strongly

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disagree to strongly agree.

Family Autonomy Support. We used 6 items from the Perception of Autonomy Support Scale (Robbins, 1994). This scale measures the degree to which children report that their autonomy is supported by their parents. *Participants were asked to please rate the extent to which you agree with the following statements with regards to your family.* Responses included “my parents, whenever possible, allow me to choose what to do,” “my parents allow me to decide things for myself,” and “my parents are usually willing to consider things from my point of view.” The participant rates on a scale of 1 (not at all true) to 5 (very much true) the extent to which each statement applies to them. The Cronbach’s alpha for this scale was .83.

Identity and Intimacy Stage Development. To assess resolution of identity and intimacy, we administered two subscales of the Erickson Psychological Stage Inventory (EPSI; Rosenthal, Gurney, & Moore, 1981). Each subscale consists of 12 statements rated on a 7-point scale, from strongly disagree to strongly agree. An example of an identity statement is, “the important things in life are clear to me.” An example of an intimacy statement is, “I care deeply for others.” The internal reliability for both scales was alphas > .80.

Results and Brief Discussion

Goal-specific Findings

Frequency of Parent Goal Support. There were a total of 1189 goals listed by the 238 participants. Friends were reported as providing support for 599 of the goals (50.4%); parents were listed as supporting 431 goals (36.2%) and 159 goals were supported by someone besides a parent or peer, e.g. advisor, uncle, coach (13.4%).

For each participant we calculated the total number of goals supported by parents with possible scores ranging from 0 to 5. Nineteen percent of the sample reporting zero goals

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supported by a parent, 29.2% one goal; 24.2 % two goals, 15% three goals, 7.9 % four goals, and 4.6% had all five goals supported by a parent. Strikingly, 81% of the sample had at least one goal for which a parent was their supporter. Furthermore, more than a quarter of the participants had parents supporting at least 3 of the five goals. On average, participants had roughly two of their five goals supported by a parent, $M = 1.77$, $sd = 1.38$. Mothers were twice as likely as fathers to be listed as supporting the goals of participants.

Features of the Goals by Support Person. Table 1 provides the descriptives and the intraclass correlations (ICCs) of goal ratings for the goals supported by either a parent or peer. Consistent with previous research (e.g., Holding et al., 2017; Werner & Milyavskaya, 2017), under 25% of the variance in goal-related characteristics was at the between-person level, with the rest on the within-person or error, indicating large differences amongst goals for any given person. To examine differences in goal characteristics we conducted a series of multilevel MIXED models using SPSS, entering each goal characteristic as the dependent variable in turn, and the support person (parent or peer) as the factor. Table 1 reports the results: it can be seen that goals supported by parents were different on all three ratings than goals supported by peers. Parents were more likely to support goals that were rated as highly important, less feasible, and low in relative autonomy. These analyses suggest that it is young adults tend to rely on their parents to support some kinds of goals more than others --- important and demanding goals for which they are less autonomously-regulated. The general impression is that our young adult participants perceive their parents as providing support for exactly those goals for which they will need the most help.

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Table 1. Study 1 Descriptives and Intraclass Correlations (ICCs) of Goal Ratings for the Goals Supported by Either a Parent or Peer.

Goal	ICC	<i>M</i> [95% CI]	<i>M</i> [95% CI]	Test of Difference
Characteristics		Parent	Peer	
Autonomy	.24	2.07 [1.82;2.32]	2.61 [2.39; 2.84]	$t(1027.55) = -3.80, p < .001$
Importance	.19	6.21 [6.11;6.32]	5.84 [5.75; 5.93]	$t(1034.59) = 6.29, p < .001$
Feasibility	.12	-.25 [-.47;.03]	0.17 [-0.03; 0.36]	$t(1033.09) = -3.10, p = .002$

Note: From $n = 1038$ goals that were supported by a parent or peer only.

The fact that our young adult participants especially rely on their parents more for important and demanding goals begs the question of who initiates this support. We did not assess whether participants sought out their parents support more for such goals or whether their parents naturally stepped in when they had important and demanding goals. It is even possible that certain goals feel difficult and controlled because the parents are invested in the child pursuing them. One way to address this would be to distinguish between the 3 short-term goals and the 2 long-term goals. A paired sample t-test revealed that parents were significantly more likely to support the long term goals (44.2%) rather than the short-term ones, 29.4%, $t(237) = 14.75$, $p < .001$. This result would seem to mitigate against a reverse causality interpretation.

Developmental Factors

A hierarchical multiple regression was conducted to examine the relation of gender, age, personality, family environment, and life stage development to relying on parents to support goals. Specifically, the total number of goals supported by parents (out of 5) was regressed on gender and age (step 1), family environment, identity and intimacy status (step 2) and the Big 5 traits (step 3). The predictor variables accounted for a significant percentage of variance in parental goal support, multiple $R = .41$, $F(10,199) = 4.06$, $p < .001$. Table 2 presents the

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standardized regression coefficients (betas) for all of the predictor variables. It can be seen that age, and intimacy status were each significantly negatively related to relying on parents for goal support, whereas family autonomy support and identity status were significantly positively related to relying on parents. The Big Five personality traits were unrelated to relying on parents for goal support.

Table 2. Study 1 Number of Goals Supported by Parents by Developmental and Personality Factors.

Predictor Variables		Standardized Coefficients β	95% CI	t	$p.<$
Step 1	Age	-.30	[-.17, -.07]	-4.51	.001
	Gender:	.01	[-.38, .47]	0.07	.850
	Identity Status	.19	[.09, .71]	2.51	.011
Step 2	Intimacy Status	-.24	[-.17, -.07]	-3.05	.001
	Family Aut Support	.13	[.00, .25]	2.14	.048
	Neuroticism	.01	[-.23, .28]	0.43	.279
	Extroversion	-.07	[-.35, .15]	-1.13	.145
Step 3	Openness to Experience	-.00	[-.30, .29]	-0.15	.292
	Agreeableness	.07	[-.15, .48]	0.80	.481
	Conscientiousness	.05	[-.20, .40]	0.90	.400

Together, the regression results suggest that emerging adults are most likely to rely on their parents for goal support when they are younger and perceive their family environment as one that encourages autonomy. In terms of Erickson's model of psychosocial development, the emerging adults who rely on their parents for goal support seem to be poised exactly between the identity and intimacy stages where they have a good sense of who they are but they are not yet sure of who they will partner with in life.

Study 2

The results of study 1 suggest that relying on parents to support one's personal goals is a normative phenomenon among emerging adults. Interestingly, emerging adults were likely to specifically receive parental support for more important goals and for difficult ones which were lower in personal interest and meaning. We would infer that important and difficult goals require more self-control resources and thus young people might welcome sharing with parents some of the self-regulatory demands of such goals. Younger participants who had not yet fully established their intimacy status were more likely to rely on their parents for goal support.

Study 2 used a longitudinal design to examine the impact of parental versus peer goal support over a full school year. Study 2 also asked participants to name goal supporters, but unlike study 1, we asked "who generally supports your goals" rather than asking who supports each specific goal. Participants were asked to indicate three "year-long" goals. We hypothesized that receiving parental goal support would again be shown to be common to the point of being normative. We planned to examine the relation of parental and peer goal support to emerging adults' levels of well-being over the course of the year. We expected to show that parental goal support that is autonomy supportive would be uniquely associated with better well-being over the school year.

We further planned to test two motivational mechanisms that might account for the relation between parental goal support and greater well-being in young adults. First, we examined whether making progress on personal goals mediated the effect of autonomy support on well-being. Previous studies have consistently shown that autonomous goal support is associated with greater goal progress (Koestner et al., 2012, 2015) and that goal progress is reliably associated with improved well-being (Diener & Fujita, 1995; Koestner et al., 2002;

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Sheldon & Hauser-Marko, 2002). Second, we examined whether changes in psychological need satisfaction over the course of the year mediates the relation of parental support to well-being. Many studies have shown a significant association between satisfaction of these needs and indicators of personal growth and thriving (Ryan & Deci, 2017). Furthermore, basic psychological needs theory allows that one of the three needs may emerge under particular conditions to carry the association with well-being (Ryan & Deci, 2017). We expected that parental goal support that was autonomy-supportive would be particularly likely to enhance young adults' satisfaction of personal autonomy.

Method

Participants and procedure

Nine hundred and fourteen participants (81% females) ages 17-30 ($M=20.43$, $SD=2.46$) attending a large public Canadian university were recruited for a year-long study of personal goals. The study was conducted in 2015-16 and again in 2016-17. The ethnic/cultural background of our sample was predominantly White and North American (80%) but included 17% Asians, 1 % African Americans, 2 % Hispanics and 1 % Middle Eastern.. The questionnaires were administered through the online survey software Qualtrics. The first survey (T1) was administered at the beginning of the academic year, and assessed participants' three personal goals, psychological need satisfaction, and subjective well-being. Follow-up surveys assessed goal support and goal progress. A total of six surveys were administered throughout the academic year, for the scope of this study we only considered three time points -- beginning (T1), middle of the fall semester (T2) and the end of school year (T3). Goal support was assessed

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in the middle of the fall semester. After receiving the link for the survey, participants had one week to complete the survey at a time of their choosing. The completion rate for each survey was $T2 = 95.7\%$, $T3 = 86.2\%$. The study was in compliance with the University Research and Ethics Board, and participants received financial compensation (\$50 CAD) for their time.³ The data collection included the assessment of action crises related to goal pursuit (Holding et al, 2017). There is no overlap between the variables included in the present study and those included in the other article.

Measures

Goal description. At T1 participants were asked to list three personal goals that they planned to pursue over the course of the academic year, using instructions identical to study 1 but replacing “semester” with “school year.”

Goal Supporter. At time 2, in the middle of the first semester, participants were asked to indicate two people who were supporting their personal goals (which they had been reminded about) and what their relationship to the persons was. The listed relationships were: friend, romantic partner, parent, sibling, other family member (e.g. aunt, grandfather), or mentor (professor, manager at work). We combined friends, romantic partner, and siblings into a “peer” category.

Autonomous and Directive Goal Support. Goal support was measured in the middle of the first semester. These two scales were measured with five items each, taken from those previously used by Koestner et al., (2012, 2015). Participants rated support using a seven-point Likert scale ranging from 1 (not at all true) to 7 (very true). Examples of autonomy supportive items include “*I feel that this person understands how I see things with respect to my goals*” and “*This person listens to how I would like to do things regarding my goals.*” Examples of directive

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support items include “*This person helps me problem solve about my goals*” and “*This person emphasizes the importance of sticking with and reaching my goals.*” The internal reliability of the autonomy support scale was $\alpha = .78$. The reliability for the directive support scale was .83. The two scales were significantly positively related to each other, mean $r = .51$.

Subjective Well Being (SWB). Subjective well-being was measured in terms of life-satisfaction and the balance of positive to negative affect that people reported. The Satisfaction With Life Scale (SWLS; Diener, Emmons, Larsen & Griffin, 1985) is a five-item scale that assesses “global life satisfaction—an evaluative judgment of one's life as a whole” (Diener et al., 1985, p. 91). Participants rated items such as “the conditions of my life are excellent” on a 7-point scale of agreement that ranged from 1 (strongly disagree) to 7 (strongly agree). Participants completed a nine-item scale of affect (Emmons, 1992) which included four positive (e.g., joyful) and five negative (e.g., frustrated) items. To ensure that responses reflected participants' recent (rather than general) affect, participants were instructed to think about how they have felt over the past two weeks when responding to all items. All items were rated on a scale from 1 (not at all) to 7 (extremely). All three scales were reliable, all α 's $> .80$ at each assessment. To compute subjective well-being, Negative affect was reversed and all 3 components of SWB were standardized before calculating the mean.

Goal Progress. Goal progress was assessed at the final follow-up using three items for each goal: “I have made a lot of progress toward this goal”, “I feel like I am on track with my goal plan”, and “I feel like I have achieved this goal”. All ratings were made on a seven point scale ranging from 1 (*strongly disagree*) to 7(*strongly agree*). A mean was calculated across all items and all goals.

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Need Satisfaction. The Balanced Measure of Psychological Needs scale (BMPN; Sheldon & Hilpert, 2012) was used to assess psychological need satisfaction and frustration at baseline and T3. Participants were asked to rate their agreement with a series of statements on a 7-point scale ranging from “*not at all true*” to “*very true*”. Need satisfaction and frustration were each assessed with 9 items, 3 statements for each need. For example, the item “I was free to do things my own way” was used to assess autonomy need satisfaction whereas the item “I experienced some kind of failure or was unable to do well at something” was used to assess competence need frustration. We reverse scored the need frustration items and calculated means for autonomy, relatedness and competence. The 6-item subscales had reliabilities, α 's $>.75$.

Results

Preliminary Results

704 participants (77% of the sample) indicated that a peer was supporting their goals. 646 participants indicated that their goals were supported by a parent (71%). 477 participants (52%) reported that they had **both** a parent and a peer supporting their goals. Thus, nearly as many participants selected a parent to support their personal goals, as selected a peer.

To examine whether levels of support varied based on the source, a repeated measures analysis of variance was conducted with type of support (autonomous/directive) and source of support (parent/peer) as within-subject factors. The analysis revealed highly significant main effects for the source of goal support, $F(1,476) = 16.41, p < .001$, the type of goal support, $F(1,476) = 136.15, p < .001$, as well the interaction between source and type, $F(1,476) = 90.64, p < .000$. Peers gave higher levels of total support ($M = 5.73$) than parents ($M = 5.53$). Autonomy support ($M = 5.79$) was given more than directive support ($M = 5.47$). The interaction

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indicates that whereas parents gave the same levels of autonomy support ($M = 5.53$) and directive support ($M = 5.54$) peers gave much higher levels of autonomy support ($M = 6.04$) than directive support ($M = 5.42$).

Table 3 presents the means and standard deviations for all of the outcome variables in study 2. Participants rated their personal goal progress across the year as moderately high, 4.78 on a 1-7 scale. Participants level of subjective well-being declined significantly over the year, $t(780) = 3.78, p < .001$. Levels of autonomy and relatedness need satisfaction also declined significantly over the year: for autonomy, $t(780) = 6.94, p < .001$ and for relatedness, $t(780) = 11.52$. Surprisingly, levels of competence need satisfaction actually rose significantly over the year, $t(780) = -3.35, p < .001$.

Table 3

Means and standard deviations for outcome variables in study 2

Variables	<i>M</i>	<i>SD</i>	1.	2.	3.	4.	5.	6.	7.	8.
1. Parental Autonomy Support	5.55	1.10	—							
2. Parental Directive Support	5.53	1.04	.61***	—						
3. Peer Directive Support	5.39	1.07	.18***	.30***	—					
4. Peer Autonomy Support	5.98	0.88	.23***	.22**	.67***	—				
5. Δ Autonomy Need Satisfaction	0.00	1.00	.14**	.02	.00	.07	—			
6. Δ Competence Need Satisfaction	0.00	1.00	.09*	.06	-.01	.05	.47***	—		
7. Δ Relatedness Need Satisfaction	0.00	1.00	.18***	.15***	.06	.11**	.48***	.35***	—	
8. Goal Progress	4.78	1.09	.23***	.18***	.12**	.17***	.19***	.27***	.17***	—
9. Δ Subjective Well-Being	0.00	1.00	.20***	.15***	.04	.08	.55***	.54***	.56***	.24***
$p < .05$; ** $p < .01$; *** $p < .001$										

Main Results

Correlations among main variables. Table 3 presents the means, standard deviations and correlations for the main variables in Study 2. Preliminary analyses had indicated that gender and age were unrelated to these measures, so they were not included in the Table. There were significant correlations among measures of support, and among measures of change in need satisfaction. There were particularly strong positive correlations between reports of autonomy support and directive support from the same source. Regression analyses will allow us to determine the unique effects of each kind of support on the various outcomes.

Outcomes by Parent and Peer Autonomy Support. Five hierarchical multiple regression analyses were performed in which yearly goal progress, end-of-the-year SWB, and end-of-the-year autonomy, competence, and relatedness need satisfaction were the dependent variables. Specifically, for SWB, and the three measures of need satisfaction we used standardized residual change scores (from baseline to the end of the year) as the dependent variables. For goal progress there was no baseline rating, so we just used end of the year progress. Age and gender were entered as a first step. Next, the ratings of autonomy support and directive support of goals from parents and peers were entered together.

The regression of change in SWB yielded a multiple R of .19, $F(6,423) = 2.62$. The only significant predictor was parental autonomy support, $b = .16$, $t(423) = 2.62$, $p < .01$. Table 4 presents the standardized regression coefficients for all predictors

The regression of goal progress yielded a multiple R of .25, $F(6,448) = 4.79$, $p < .001$. Two significant predictors emerged. Parental autonomy support and peer autonomy support were both significantly positively associated with goal progress: for parents, $b = .14$, $t(448) = 2.42$, $p = .02$ and for peers, $\beta = .15$, $t(448) = 2.52$, $p = .01$.

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The regression of change in autonomy need satisfaction yielded a multiple R of .21, $F(6,422) = 3.16, p < .01$. Two significant effects emerged. Parent autonomy support was positively related to change in autonomy need satisfaction, $b = .20, t(422) = 3.38, p = .001$. By contrast, parent directive support was negatively related to autonomy need satisfaction, $b = -.12, t(422) = -2.00, p = .05$.

The regression of change in competence was significant, multiple $R = .18, F(6, 422) = 2.28, p < .05$. The only significant predictor, however, was age, $b = .13, t(422) = 2.57, p = .01$. Older participants were more likely to increase in competence over the school year. The regression of change in relatedness revealed no effects that were significant. We do not report results for competence and relatedness in Table 4 for reasons of space.

Table 4.
Study 2 Hierarchical Regressions of Changes in Subjective Well-Being, Goal Progress and Changes in Autonomous Need Satisfaction Predicted by Parental and Peer Support.

	Change in Subjective Well-Being				Goal Progress				Change in Autonomous Need Satisfaction			
	b	t	95% CI	R^2	b	t	95% CI	R^2	b	t	95% CI	R^2
Age	.05	.95	[-.02, .06]	.00	.00	.04	[-.04, .04]	.00	.09	1.89	[-.00, .08]	.01
Sex	-.01	-.19	[-.25, .21]		-.10	-.79	[-.35, .15]		-.04	-.75	[-.33, .15]	
Parental Autonomy Support	.16**	2.62	[.03, .24]	.04	.14*	2.42	[.03, .24]	.06	.20**	3.38	[.08, .28]	.04
Parental Directive Support	.04	.72	[-.07, .15]		.06	.10	[-.06, .18]		-.12	-2.00	[-.23, -.00]	
Peer Directive Support	-.03	.65	[-.14, .09]		-.04	-.63	[-.16, .08]		-.04	-.58	[-.15, .08]	
Peer Autonomy Support	.01	.83	[-.14, .17]		.15**	2.52	[.05, .36]		.07	1.15	[-.07, .25]	

** $p < .01$; * $p < .05$

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Mediational Analyses

The hierarchical regression results outlined above point to a possible mediational role for goal progress and satisfaction of the need for autonomy in the relation of parental autonomy support to subjective well-being over time. A path analysis model (performed using MPlus 8; Muthen & Muthen,) was conducted to test the model outlined in Figure 1, testing whether goal progress and autonomy need satisfaction did, in fact, mediate the effects of parental autonomy support on subjective well-being. Both goal progress and enhanced satisfaction of the need for autonomy were entered together in the model to examine how each contributed to explaining how parental autonomy support of young adults' personal goals translates into higher levels of well-being over the school year. In line with the regression analyses above, standardized residual change scores (from baseline to the end of the year) were used for autonomy support and well-being.

Results from the SEM analysis are presented in Figure 1 and Table 5. Parental autonomy support was a significant predictor of both yearly goal progress ($b=.19$, $SE=.05$, $p < .001$, CI 95% [.09, .29]) and change in autonomy need satisfaction ($b=.22$, $SE=.05$, $p < .001$, CI 95% [.11, .32]). In addition, goal progress ($b=.12$, $SE=.03$, $p=.001$, CI 95% [.05, .18]) and change in autonomy need satisfaction ($b=.53$, $SE=.03$, $p < .001$, CI 95% [.48, .58]) were significant predictors of change in subjective well-being, such that increased progress and higher autonomy was associated with the highest level of SWB at the end of the school year. As expected, there were indirect effects of parental autonomy support on change in subjective well-being through goal progress ($b=.02$, $SE=.01$, CI 95% [.01, .04], $p=.009$) and autonomy need satisfaction ($b=.11$, $SE=.03$, CI 95% [.06, .17], $p < .001$). Additionally, there was a significant negative indirect effect of parental directive support on well-being via changes in need satisfaction ($b=-.06$, $SE=$

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.03, CI 95% [-.12, .003], $p = .039$). This negative indirect effect counteracted by a small positive direct effect of Parent DS on SWB, resulting in a nil total effect of Parent DS on SWB, consistent with the regression analyses reported above.

Figure 1. Path analyses testing goal progress and changes in autonomy need satisfaction as mediators in the relation between parental autonomy support and change in subjective well-being over the school year.

Note. AS = Autonomy Support; DS = Directive Support; SWB = subjective well-being. All solid lines are significant at $p < .05$. For all exact values, see Table 5.

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Table 5.

Results from SEM model examining progress and change in autonomy need satisfaction as mediators of the relation between parental autonomy support and change in subjective well-being.

	Standardized coefficient [95%CI]	SE	EST/SE	p
Direct effects				
Parent AS→Progress	.19 [.09; .29]	.05	3.72	<.001
Parent DS→Progress	.04 [-.07; .14]	.05	.68	.495
Peer AS→Progress	-.03 [-.13; .07]	.05	-.58	.562
Peer DS→Progress	.15 [.05; .24]	.05	2.88	.004
Parent AS→change in ANS	.22 [.11; .30]	.05	4.10	<.001
Parent DS→ change in ANS	-.12 [-.23; -.01]	.06	-2.10	.036
Peer AS→ change in ANS	-.06 [-.17; .05]	.06	-1.11	.265
Peer DS→ change in ANS	.09 [-.02; .20]	.06	1.69	.090
Parent AS→change in SWB	.03 [-.06; .12]	.05	.68	.494
Parent DS→ change in SWB	.10 [.01; .19]	.05	2.18	.029
Peer AS→ change in SWB	-.01 [-.10; .09]	.05	-.14	.889
Peer DS→ change in SWB	-.01 [-.10; .09]	.05	-.13	.896
Progress →change in SWB	.12 [.05; .18]	.03	3.68	<.001
change in ANS→change in SWB	.53 [.48; .58]	.03	19.74	<.001
Indirect Effects				
Parent AS→Progress→ change in SWB	.02[.01; .04]	.01	2.61	.009
Parent AS→ change in ANS → change in SWB	.11 [.06;.17]	.03	4.00	<.001
Parent DS→Progress→ change in SWB	.004 [-.01;.02]	.01	.67	.500
Parent DS→ change in ANS → change in SWB	-.06 [-.12; -.003]	.03	-2.06	.039

Note. AS = Autonomy Support; DS = Directive Support; ANS = autonomy need satisfaction; SWB = subjective well-being. Bold indicates paths statistically significant at the $p < .05$ level.

General Discussion

Our results suggest that it is normative for emerging adults to receive the support of their parents in their goal pursuit, particularly for goals that were important, difficult, and less autonomously regulated. The extent to which university students relied on their parents was

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surprising. Across the two studies, more than 80 percent of participants reported relying on parents for support of their goals. The fact that parental support was especially common for more challenging goals suggests that when emerging adults expect the self-regulation of goal pursuit to be difficult to maintain, they are especially likely to receive the support of their parents rather than on peers. This may represent an example of adaptive out-sourcing of self-regulatory demands which is thought to occur with supportive and helpful relationship partners (Fitzsimons and Finkel, 2011). Our results add specificity to the widely accepted notion that social support benefits individuals in their goal pursuits (Fitzsimons & Finkel, 2011). That is, it would seem that certain kinds of support (autonomy focused) received from certain sources (parents) will benefit emerging adults as they pursue their goals.

The association of having parental goal supporters with a variety of developmental factors points toward the likely strategic and adaptive value of seeking support from parents. Study 1 found that younger participants were significantly more likely to receive parental goal support, perhaps reflecting a wise strategic choice. Importantly, having more goals supported by parents was not associated with delayed identity development in emerging adults. In fact, young people who were more advanced in their identity development were especially likely to receive parental goal support. Interestingly, intimacy development showed an opposite relation: Those individuals who had made the most progress in establishing stable intimate relationships were the least likely to receive goal support from their parents. No doubt, these individuals were showing greater reliance on romantic partners as they pursued their personal goals. A final indication that receiving parent goal support may be adaptive rather than an indication of dependency (or lack of competence) was the fact that individuals who were growing up in family environments that were perceived as supporting autonomy and individuation were more likely to

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rely on their parents for goal support. Finally, it is noteworthy that there was no evidence that young people who relied on their parents were somehow deficient in terms of their standing on the Big 5 traits. Thus, there was no evidence that those who sought their parents support for goals possessed less adaptive traits (e.g., high neuroticism, low conscientiousness).

One way to answer the question of whether relying on parents to support one's goals is adaptive is to track young adults' subjective well-being over time. Subjective well-being reflects successful adaptation and has traditionally been assessed in terms of life satisfaction and the balance of positive and negative affect (Diener & Fujita, 1996). The results of study 2 showed that parental autonomy support of young adults' goals was uniquely associated with higher levels of subjective well-being over the school year. Parental directive support was unrelated to participants' well-being, and peer support (both autonomous and directive) had no perceptible effects. Given that the university students included in the present study generally showed declines in their level of well-being over the year, it would seem that autonomous goal support from parents' acts to mitigate the typical downward trajectory of well-being over the course of a school year.

The results of study 2 also identified the mechanisms by which parental support may buffer young adults' well-being; namely, by promoting progress on personal goals and by enhancing young people experience of autonomy in their everyday lives. Thus, parental autonomy support was significantly associated with both enhanced goal progress and enhanced autonomy need satisfaction, and both of these factors were associated with greater subjective well-being over time. Peer autonomy support also was associated with greater goal progress, but it bore no relation to changes in subjective well-being. Interestingly, satisfaction of the need for competence was also associated with parental autonomy goal support and to well-being. These

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positive findings for parental autonomy support point toward the potential adaptive value of emerging adults choosing to rely on their parents as they pursue important goals.

Our participants were generally equally likely to receive goal support from peers and parents. The prospective longitudinal results showed that parental goal support was associated with significantly greater progress over the school year if it was in the form of autonomy support. Autonomous goal support from parents is characterized by acting in such a way that children feel they can be open about their goals and that their parents understand how they sees things with respect their goals. Directive goal support from parents was unrelated to goal progress. Autonomy support from peers was also significantly associated with goal progress; directive support was unrelated to goal progress. The fact that autonomy support from both parents and peers was associated with greater goal progress replicates previous research, as do the null findings for directive support (Koestner et al., 2012; 2015; Gorin et al, 2014; Powers et al., 2008).

Differences between parents and peers in the way they give goal support were observed. Parents were shown to give almost exactly the same levels of directive support as autonomy support whereas peers gave dramatically higher levels of autonomy support than directive support. It seems that the hierarchical nature of the parent-child relationships, although changing somewhat during emerging adulthood, makes parents feel comfortable to give directive support. The egalitarian nature of peer relationships probably inhibits young adults from giving directive advice and guidance regarding their friends' goals.

The results of study 2 suggest that directive support of goals generally produced no effects on mediator or outcome variables. Thus, directive support from both parents and peers was unrelated to subjective well-being, goal progress, and need satisfaction of competence and

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relatedness. Interestingly, parental directive support was significantly *negatively* related to changes in autonomy need satisfaction over the year. That is, receiving high levels of directive goal support from parents resulted in being more likely to report that they “had a lot of pressures they could do without” and that their choices “did not express their true self.” There have been two studies in the weight loss context which showed that directive support from romantic partners can actually backfire and result in significantly worse well-being and goal progress (Gettens et al, 2019; Gorin et al, 2013). We would suggest that for certain types of goals, and in certain relationships, there is a danger that giving encouragement and help in problem-solving can be experienced as intrusive or controlling. A recent study showed similar results after couples discussed their personal goals together – individuals who had an avoidant attachment responded poorly to visible, direct support from their partners (Girme, Overall, & Hammond, 2019). For emerging adults who are striving to achieve an identity, it seems that directive parental support of their personal goals inhibits their sense of personal autonomy.

The present study suffered from a number of limitations. First, all of the data we collected was based on self-reports. It would have been useful to obtain reports of goal support directly from parents (and peers). It would also be helpful to include objective assessments of goal progress, but it should be noted that previous studies have shown that autonomous goal support has resulted in objective goal progress (Koestner et al., 2012; Gorin et al 2013). Another limitation is that we failed to consider that many goals are not only supported by others, but they are actually shared with others. Gore and Cross (2006) have shown that people often pursue goals for reasons that take into account close relationships (termed relationally autonomous reasons). Indeed, pursuing goals for relational reasons was shown to be beneficial to goal pursuit and attainment. A third limitation is that our sample was predominantly female. There was

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however, no evidence that gender was related to receiving goal support from parents. A fourth limitation is that in study 2 the percentage of variance in subjective well-being accounted for by parental autonomy support is relatively modest.

Another limitation is that our studies did not directly assess the process by which participants had others become involved in supporting their goal pursuits. We have assumed that the young adult participants were active in requesting and seeking support but it is also possible that, to some extent, close others took initiative in becoming involved in their goals. In study 1, the participants were asked, who is the person who is most likely to support each of your goals? And in study 2 the participants listed two people who supported their pursuit of goals generally. Self-report correlational data like we have collected cannot sort out the extent to which goal support was actively enlisted or recruited. We cannot be certain, for example, whether parents were especially likely to get involved with goals that were difficult or whether students were especially likely to reach out to parents for such goals. The potential bi-directionality is relevant to the interpretation of autonomy support and directive support. However, given the finding from study 1 that participants were especially likely to report parent support of goals when they experienced their family environment as highly autonomy-supportive, we would expect that in most cases the parental support reflects an example of willing recruitment of support or volitional dependence on the part of young adults. Given the clear benefits of parent goal support in study 2 – linked with greater autonomy satisfaction and better well-being – it seems more likely that the parent support is experienced as volitional rather than controlled.

A final limitation is that our studies included only university students, who account for roughly 40% of American emerging adults and who seem to be particularly close to their parents (Lindell, Campione-Barr & Killoran, 2017). The process of going to university probably affords

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emerging adults the opportunity to spend more time in the identity exploration phase because the environment encourages attending different classes, joining different groups and taking on new interests. The prolongation of the identity stage may make young adults who attend university more receptive to parental support. Conversely, emerging adults who enter the work force at age 18 may resolve the identity stage faster and move to the intimacy stage sooner where they would rely less on parental support. Future research needs to determine whether parental goal support functions in the same way for emerging adults who decide to forego university.

Although our current findings suggest that it is adaptive for emerging adults to receive goal support from their parents, it is important to highlight that it was only true for parental support that was autonomous. In the present investigation, we did not assess more intrusive and controlling efforts of parents to support the goal pursuits of their emerging adult children. It is easy to imagine that some parents may engage in goal support in a way that actually undermines their children's efforts to self-regulate effectively. Indeed, the term "helicopter parenting" has been used to describe parents who limit their child's autonomy in excessive and developmentally inappropriate ways such as choosing their children's classes or mediating in their friendship conflicts (Padilla-Walker & Nelson, 2012). Helicopter parenting typically occurs in the context of warm parent-child relationships and is associated with lower levels of autonomy development and school engagement (Padilla-Walker & Nelson, 2012). We believe that our concept of parental autonomy goal support is distinct from helicopter parenting. Indeed, we also believe that directive goal support only somewhat overlaps with helicopter parenting because it entails joint problem-solving and co-regulation of the goal rather than having the parent actually take over the goal pursuit process.

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Despite the concern about the possibility that parents can insert themselves into the goal pursuits of their emerging adult children in a controlling manner, we assert that parents do have an important and active role to play. It would be a mistake for parents of young adults to respond to worries about helicopter parenting by adopting a laissez faire stance toward the goal pursuits of university students. With regards to parent-child relationships, SDT suggests that parental autonomy support (not parental detachment) is what young people require for optimal development, and that a focus on independence promotion may thwart such development as much as intrusive and controlling parenting would (Soenens & Vansteenkiste, 2010). The SDT perspective on the role of parental guidance during emergent adulthood can be seen in the following quote:

“The ideal trajectory of parent-child relationships is therefore not ‘individuation’, insofar as that is characterized by necessarily separating or growing apart from parents, but is instead a continued trusting and close relationship that transforms over time to become more mutual and reciprocal. In the SDT framework, children need not ‘detach’ from loving parents, even as their relationships change and the children become increasingly self-regulating and self-sustaining in contexts outside the family. “(Ryan & Deci, 2017, p. 350.

A popular proverb suggests that “when the going gets tough, the tough get going.” The proverb plays on the distinct meanings of the words "go" and "tough" to suggest that active self-reliance is the key to overcoming tough times. Our results, by contrast, suggest a more collaborative solution for when personal goals become tough for emerging adults. Namely, when emerging adults face tough personal goals the most adaptive response may be to call upon their parents for support -- as long as their parents have shown the capacity to take their perspective and give support in autonomy affirming ways.

Footnotes

¹The surveys were administered in such a way so as to highlight our focus on personality and goal-setting. The fact that we were interested in parental support was never made salient. We simply asked what goals people had set and then later inquired about who was likely to support each goal. This approach would seem to minimize the risk of having participants' framing the study in terms of their family relationships.

² Other research with this data has examined the role of domain need satisfaction in autonomous goals (Milyavskaya, Nadolny, & Koestner, 2014), goal support (Koestner, Powers, Milyavskaya, Carbonneau, & Hope, 2015), trait perfectionism and changes in affect (Milyavskaya et al., 2014), changes in identity and intimacy development as a function of changes in values (Hope, Koestner, Milyavskaya, & Holding, 2014), the aspirational content of goals on goal progress and vitality (Hope, Milyavskaya, Holding, & Koestner, 2014), and the effects of perfectionism on attributions of success and failure (Levine et al., 2018). There is no overlap between the content and the hypotheses of the present study and the other studies that have used this sample.

³ The data collection included the assessment of action crises related to goal pursuit (Holding et al, 2017). There is no overlap between the variables included in the present study and those included in the other article.

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