

The Advisor and Instructor as a Dynamic Duo: Academic Motivation and Basic Psychological Needs

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Students learn in and out of a formal classroom, and instructors and academic advisors play key roles in academic motivation and learning. Therefore, through the lens of self-determination theory, we examined the ways perceived support from instructors and advisors relates to satisfaction of college students' basic psychological needs. Advisor and instructor support correlated with satisfaction of student needs for autonomy, competence, and relatedness. Also, as hypothesized, instructor and advisor support predicted satisfaction of basic needs, but did so differently. Instructors and academic advisors create a dynamic duo that significantly contributes to satisfaction of basic psychological needs underlying motivation and achievement.

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Perceived support is a powerful motivator of student success (National Research Council and Institute of Medicine, 2004). Conversely, low levels of perceived support are associated with decreased levels of academic motivation (Legault, Green-Demers, & Pelletier, 2006). Although empirically linked to student motivation and success, the nature of perceived support requires further research as the impact of complex support relationships undergirding student academic performance remains underexplored (Wentzel, Battle, Russell, & Looney, 2010). Students receive support from multiple sources (e.g., teachers, academic advisors, peers, and family members); however, institutions can most readily monitor and adjust support provided within the academic setting. Wentzel et al. recommended investigating varied sources of support available in academic settings to better define academic support as a construct and to inform efforts to create educational environments that enhance motivation and achievement. We explore how two sources of academic support

in higher education—student interactions with instructors and with academic advisors—relate to satisfaction of student needs that influence motivation.

School-Related Social Support

The impact of social support from educational professionals on postsecondary student academic performance remains unclear as investigators have focused predominantly on middle and secondary student populations to show that teacher support enhances educational outcomes (e.g., Brewster & Bowen, 2004; Danielsen, Samdal, Hetland, & Wold, 2009; Wentzel et al., 2010). However, a dearth of research characterizes the literature relating to perceived support and academic motivation in college students.

Despite student success ties to personal connections (e.g., with instructors and academic advisors), few studies have empirically demonstrated the ways perceived support from academic professionals contribute to college retention and other educational outcomes (e.g., Habley & McClanahan, 2004). Some scholars have investigated perceived social support from faculty members in college classrooms (e.g., Frymier & Houser, 2000) and fewer have explored supportive student interactions with instructors outside of class (e.g., Jones, 2008) or the impact of perceived instructor support on academic motivation (e.g., Levesque, Stanek, Zuehlke, & Ryan, 2004). Furthermore, limited research empirically relates academic advising to student motivation and success. Aligned with Baxter Magolda's (2004) learning partnerships model, past studies have shown that advising can help students cultivate a sense of academic self-efficacy and be transformative through development of and reflection on goals and volitional planning (Gore, 2006; Pizzolato, 2006). Although existing literature relates social support to student retention, perceived support has been less commonly investigated with regard to academic motivation and performance (Robbins et al., 2004). No known studies have

simultaneously investigated the motivational influence of perceived support from instructors and academic advisors on the same group of college students.

Instructor Support

Students encounter challenges in and out of the classroom that affect achievement. However, limited studies focus on instructor social support for college students, and few focus on provision of such support outside of the classroom. College students are more motivated to learn when instructors practice ego supportive skills (i.e., empower students to feel positive about themselves and in control of their environments)—suggesting that when approached by stressed students needing help, instructors can positively influence academic motivation by assisting with problem management (Frymier & Houser, 2000). Jones (2008) demonstrated increased school satisfaction and motivation to learn among college students who received higher levels of out-of-class instructor support (i.e., caring communication; responsiveness to needs; validation of worth, feelings, or actions; help to manage or cope with stress through provision of information, assistance, or other resources). Instructors can communicate support through timely feedback on assignments or through class discussions; however, the impact of such support may be enhanced when instructors assist students outside of the formal classroom learning environment.

Instructor support can influence students' attainment of academic goals. Faculty members communicate course expectations and assist students with the mastery of specific subject matter required to complete courses. However, course grades are not the only important educational outcomes. Many students and faculty members hold fragmented views of the educational experience—isolating specific courses from educational and career goals that comprise the framework within which students expect to experience immediate and long-term successes (Borgard, 2009). While completed courses lead to desired degrees and progress toward career goals, factors outside of the classroom also affect goal achievement. Through academic advising, faculty members can fill the support gap by teaching students to connect multiple elements within a cohesive overall college experience (e.g., explaining the reasons specific classes matter, describing the ways subjects connect to or complement others, and pointing out the cocurricular experi-

ences best aligned with educational and career goals).

Advisor Support

Whereas instructors primarily focus on student mastery of specific course content, academic advisors may possess greater opportunities to teach broad strategies that enhance motivation and achievement (Kallenbach & Zafft, 2004). Advisors can facilitate student learning that connects diverse interactions with specific course content, campus resources, and educational professionals to the overall college experience (Borgard, 2009). For example, students entering college may express dissatisfaction with low perceived levels of instructor support, unaware that instructors often willingly provide extra assistance if approached (Oliver, Ricard, Witt, Alvarado, & Hill, 2010). Advisors can empower students by encouraging them to seek assistance from instructors. When informed and supported by instructors and advisors, students can purposefully construct and navigate the most meaningful experiences in pursuit of their aspirations.

Academic advising provides a prime venue for institutions to educate and support students outside of the classroom. However, empirical studies have primarily demonstrated correlational instead of predictive relationships between advising and student outcomes. Specifically, strong correlations exist between college retention and nonacademic factors, including goals, social support, and self-confidence (Lotkowski, Robbins, & Noeth, 2004), while high standards and support from advisors have been associated, through student reports, with positive perceptions of learning and high satisfaction with educational experiences (Lan & Williams, 2005). Additional research is needed to enhance understanding of the impact of advising on student learning and academic achievement.

Demetriou (2011) stated that “academic advisors may influence the development or decline of motivation by helping students identify strategies they can employ for academic success” (p. 19). In the same study, she examined attribution theory and college student motivation in the context of learning behaviors, highlighting that sustained motivation is more likely when students feel control over outcomes. Other studies have suggested that learning motivation is enhanced when students believe they can apply appropriate learning strategies (e.g., Baxter Magolda, 2004; Pizzolato, 2006; Schunk & Zimmerman, 2006).

Students enter higher education with varying beliefs about their abilities to navigate the college environment; for example, some high school students who enter college early express unrealistic views (Wolk, 2005), and due to uncertain expectations, first-generation students may experience anxiety (Davis, 2010). Academic advisors can educate and support students to develop strategies for navigating the college arena.

Academic Support Through Advising as Teaching

The relatively recent shift toward a view of academic advising as a teaching and learning process (Lowenstein, 2005/2009) suggests similarity and potentially beneficial interaction between the support students receive from instructors and advisors. Faculty members have the potential to serve as effective advisors because they typically create environments that promote student learning and development. Academic advisors can promote learning by mentoring students toward effective goal setting, decision making, relationship building, incorporating strategies for academic success as well as developing self-regulation and self-determination (Wiseman & Messitt, 2010). Whereas grades offer an immediate measure of success in individual classes, academic support potentially links success at every level of a student's educational experience—from specific courses to navigating the broader college curriculum.

In addition to enhancing student development and achievement, support from educational professionals positively affects college retention—an indicator of success for individuals and institutions enhanced as students make persistent progress in pursuit of degrees. Instructor support outside the classroom may help students feel more comfortable with and connected to teachers and educational institutions, thus affecting school persistence (Jones, 2008). Although not directly addressed by Jones, teaching through academic advising supports academic success of students beyond specific classes.

Academic support is available through advising that informs and encourages student participation in learning opportunities and through instruction that communicates course content and concern about student success. For example, academic and social support through curricular learning communities improved retention of students identified as at high risk of dropping out (i.e., first-year students living off campus and

those with substandard ACT scores) (Potts & Schultz, 2008). Peer and faculty relationships appear to “serve more than an academic function” (Beachboard, Beachboard, Li, & Adkison, 2011, p. 40); thus, by engaging in relationships with educational professionals, students may feel motivated to complete a degree from a specific institution. Returning to Habley and McClanahan's (2004) point, the presence of a caring individual on campus is a key contributor to college student success.

Academic Applications of Self-determination Theory

Self-determination theory (SDT) (Deci & Ryan, 1980, 1985, 2000, 2002, 2008; Deci, Vallerand, Pelletier, & Ryan, 1991; Ryan & Deci, 2000a, 2000b) provides a framework within which researchers can examine needs, goals, support, motivation, and performance. Ryan and Deci (2000a) addressed ways environmental conditions relate to intrinsic motivation (e.g., through inherent satisfaction), various levels of extrinsic motivation (e.g., through compliance, self-control, conscious valuing, or integration by personal synthesis), and amotivation (e.g., through lack of intention or control). Intrinsic motivation, the most desirable on the self-determination continuum in terms of positive psychological and behavioral outcomes, results from personal choice. Extrinsic motivation is controlled by external forces that influence self-determined outcomes, and amotivation indicates a lack of self-regulated effort toward an outcome. Goal attainment is enhanced through intrinsic or integrated extrinsic motivation—conditions more prevalent in situations through which three basic needs are satisfied: autonomy, competence, and relatedness (Ryan & Deci, 2000a).

Basic psychological needs for autonomy, competence, and relatedness are innate, and meeting these needs is “essential for ongoing psychological growth, integrity, and well-being” (Deci & Ryan, 2000, p. 229). According to SDT, autonomy—which is similar to volition—reflects self-organized experience and the freedom to make decisions congruent with one's integrated sense of self; under SDT, autonomy differs from internal locus of control, independence, and individualism. Competence demonstrates a human inclination to affect and glean valued outcomes from the surrounding environment, and relatedness refers to desires for loving, caring connections with others. Satisfaction of basic psychological needs energizes motivation to pursue and attain goals in diverse venues such as

personal relationships, religious practice, and sports as well as in schools and workplaces. Thwarted needs decrease intrinsic motivation and may result in helplessness or development of maladaptive behavior patterns (Deci et al., 1991; Deci & Ryan, 2000; Ryan & Deci, 2000a, 2000b).

Academic motivation and performance are enhanced in environments that support satisfaction of students' basic needs (Faye & Sharpe, 2008; Sheldon & Krieger, 2007), and the reverse is also true (Deci et al., 1991; Levesque et al., 2004). Application of SDT to academic advising remains uncharted territory, and according to Erlich and Russ-Eft (2011), related literature would benefit from expansion based on research aligned with theories from social sciences and other fields. Indeed, they suggested that researchers have both the license and obligation to extend advising literature in this manner. Specifically, advisor-scholars need to address ways instructors, advisors, and others in educational institutions support satisfaction of students' basic needs to enhance academic motivation and success.

SDT underscores the importance of perceived security and relatedness (Deci & Ryan, 2008) for understanding context-specific motivation and well-being, thus aligning academic application of the theory with Tinto's (1975, 2005) assertions that postsecondary institutions can meet student needs through supportive environments. Studies demonstrate that supportive conditions likely enhance student motivation, persistence, and academic achievement in educational settings (e.g., Faye & Sharpe, 2008; Katz, Kaplan, & Gueta, 2010; Legault et al., 2006; Patall, Cooper, & Wynn, 2010; Reeve & Halusic, 2009). In summary, meaningful support can create conditions that enhance academic motivation through satisfaction of students' basic psychological needs.

Instructor Support and Student Needs

Support from instructors can contribute to satisfaction of students' basic psychological needs through provision of opportunities for relatedness, encouragement of autonomy, and validation of competence (Frymier & Houser, 2000). For instance, autonomy-supportive teachers can help meet K-12 student needs for competence by providing information and guidance (Jones, 2008); teachers can also satisfy needs for relatedness through interpersonal involvement, thereby beneficially influencing students in academic and developmental domains (Reeve, 2006; Reeve & Halusic, 2009; Reeve &

Jang, 2006). Research relating instructor support to basic need satisfaction in college students remains limited (see, e.g., Beachboard et al., 2011, for a study on enhanced relatedness in a curricular-learning community), and expanded understanding about meeting basic psychological needs in the college teaching environment may improve pedagogy and student learning outcomes.

Advisor Support and Student Needs

Although SDT has not been specifically applied to advising in empirical studies, some researchers have shown that quality academic advising likely contributes to satisfaction of students' basic needs. For example, Bitz (2011) demonstrated that advising contact and relationship quality are positively correlated with student satisfaction; however, the study addressed relatedness as a way to enhance an advising relationship as opposed to meeting a basic need that can be measured and modified to enhance academic motivation. Firmin and MacKillop (2008) found that students who frequently change majors may have discounted or received inadequate advice from high school guidance counselors and subsequently enter college lacking self-awareness of their strengths and interests. Advisors can educate students about resources available to assist with academic and career planning, thereby contributing to satisfaction of competence needs. In addition, peer relationships that encourage autonomy can increase students' confidence in their own decision-making abilities (Guay, Senecal, Gauthier, & Fernet, 2003); thus, autonomy-supportive academic and peer advising could produce benefits in relation to educational and career decision making.

Present Study

We designed the present study to identify contributions of university faculty members and advisors in the context of academic motivation and satisfaction of basic psychological needs. According to previous studies, instructor support may lead to satisfaction of student needs for competence (e.g., Faye & Sharpe, 2008; Legault et al., 2006). However, empirical literature does not demonstrate previous application of SDT to investigate the relationships between academic advising and satisfaction of students' basic psychological needs. While the majority of academic motivation research has focused on K-12 students, we aimed to expand the literature by exploring related

constructs in college students. To this end, we applied SDT to academic advising and compared perceived support from instructors and advisors in a single sample of college students. The following research questions guided our study:

- RQ1. Based on student perceptions of support, do college instructors significantly contribute to the fulfillment of students' basic psychological needs?
- RQ2. Based on student perceptions of support, do academic advisors significantly contribute to the fulfillment of students' basic psychological needs?
- RQ3. Do student perceptions of advisor support predict satisfaction of basic psychological needs differently than student perceptions of instructor support?

Method

Participants

Participants consisted of college students, aged 18 to 25 years, enrolled at a large midwestern public university ($N = 147$). We recruited students from an introductory psychology course through an online experiment management system, and they received course credit for participation. We informed students of study requirements, provided our contact information, and assured them that data would remain anonymous and confidential. Students could exit the study at any time without penalty.

Materials

Participants responded to a series of questions regarding basic psychological needs, perceived support, and demographic characteristics (e.g., gender and age). We employed the *Basic Needs Satisfaction in Life (General) Scale* (Self-Determination Theory, n.d.a.) (see Ilardi, Leone, Kasser, & Ryan, 1993, for illustration of SDT application), which is comprised of 21 items used to assess autonomy, competence, and relatedness as basic psychological needs (Deci & Ryan, 2000, 2002; Ryan & Deci, 2000b). Perceived support questions included original items and those adapted from the following inventories: the *Teaching Styles Survey* (Grasha & Riechmann-Hruska, 1996), *Subject Impressions Questionnaire* (Self-Determination Theory, n.d.b.), and the

Learning Climate Questionnaire (Williams & Deci, 1996). The 148 perceived support items addressed the importance of an instructor and an advisor sharing expertise and knowledge, student enjoyment of interaction with each person, and the extent to which each individual provided the student with choices among options. Perceived support and basic needs questionnaires incorporated a Likert scale from 1 to 7 (where 1 = *Strongly Disagree* and 7 = *Strongly Agree*), and some demographic items required a *yes* or *no* response.

Participants responded to two different sets of perceived support questions. The first set prompted students to answer questions while thinking of one specific faculty member from whom they had taken a college course. Team-taught courses were specifically excluded because the instrument required students to rate only one instructor. Participants then addressed the same items while thinking about their academic advisor. Students did not provide the names of instructors or advisors. We calculated the perceived support variable by computing average instructor and advisor scores for each participant.

Procedure

Participants logged into an online experiment management system using an existing username and password. After giving their informed consent, they received a questionnaire that required approximately 30 minutes to complete (no time limit was imposed). Data from participants who took less than 15 minutes to complete the questionnaire ($n = 15$) were excluded. Additionally, seven cases were eliminated for missing data on the *Basic Needs Satisfaction in Life (General) Scale* ($n = 7$). In total, 22 cases (14.9%) were deleted; however, because of the large sample size ($N = 147$), the impact did not influence results.

Results

Student Demographics

The final sample consisted of 125 undergraduates, with 89% reporting their age between 18 and 20 years ($n = 111$) and fewer than 1% ($n = 8$) reporting ages between 21 and 22 years. Female students ($n = 81$) outnumbered male students ($n = 44$), and the reported ethnicity was primarily Caucasian ($n = 107$), followed by African American ($n = 9$), other ($n = 6$), and Asian ($n = 3$). Seventy-one percent of students lived on

campus ($n = 89$), and 71% of students had a declared major ($n = 89$).

Perceived Instructor Support and Basic Needs

To investigate the relationship between perceived instructor support and basic psychological needs, we calculated mean subtotal scores for average perceived instructor support ($M = 5.14$, $SD = .90$), autonomy ($M = 5.08$, $SD = .79$), competence ($M = 5.25$, $SD = .92$), and relatedness ($M = 5.74$, $SD = .88$). Pearson bivariate correlation results indicated a positive relationship between perceived support from instructors and student needs for autonomy, $r(125) = .269$, $p < .01$; competence, $r(125) = .340$, $p < .001$; and relatedness, $r(125) = .283$, $p < .01$. This finding revealed that as levels of perceived instructor support increased, so, too, did satisfaction of students' basic psychological needs.

Perceived Advisor Support and Basic Needs

We calculated the mean score for perceived support from academic advisors ($M = 5.15$, $SD = .93$) and subsequently applied Pearson bivariate correlational analyses to explore relationships between perceived advisor support and the basic psychological needs of autonomy ($M = 5.08$, $SD = .79$), competence ($M = 5.25$, $SD = .92$), and relatedness ($M = 5.74$, $SD = .88$). We found positive correlations for perceived advisor support and autonomy, $r(125) = .410$, $p < .001$; competence, $r(125) = .333$, $p < .001$; and relatedness, $r(125) = .309$, $p < .001$. These results demonstrated that higher perceived support from academic advisors related to higher levels of basic needs satisfaction in students.

Prediction of Autonomy

We conducted a multiple regression analysis to predict the satisfaction of autonomy needs by perceived support from instructors and advisors. Table 1 indicates that the regression model with both predictors produced $R^2 = .190$ and $F(2, 124) = 14.314$, $p < .001$, showing that this two-factor solution significantly predicted 19% of autonomy. Additionally, beta weights for sources of perceived support indicated that support from academic advisors ($\beta = .361$, $p < .001$) significantly predicted autonomy in this model. Conversely, perceived instructor support ($\beta = .157$, $p = .07$) did not significantly predict autonomy in this model. Examination of the

Table 1. Multiple regression predicting satisfaction of basic needs as a function of instructor and advisor support, $N = 125$

Variable	<i>B</i>	<i>SE B</i>	β	<i>p</i>
Autonomy				
Instructors	.137	.075	.157	.070
Advisors	.306	.073	.361	<.001
Competence				
Instructors	.267	.089	.262	.003
Advisors	.250	.086	.252	.004
Relatedness				
Instructors	.201	.086	.207	.021
Advisors	.231	.084	.245	.007

correlations and beta weights for each predictor suggested a mediation effect.

We applied a hierarchical regression to examine potential mediation effects of the factors in the model. Previous data suggested perceived advisor support mediates the relationship of perceived instructor support with autonomy; therefore, in the regression, we first entered data on perceived instructor support. Results indicated that perceived advisor support mediates the relationship of perceived instructor support with autonomy. Prior to introduction of perceived advisor support, perceived instructor support was significant ($\beta = .269$, $p < .01$); however, as displayed in Table 2, after we included data on perceived advisor support, the instructor support beta weight dropped by 42% and was not significant ($\beta = .157$, $p = .07$). In conclusion, results regarding prediction of autonomy suggest that perceived advisor support fully mediates perceived instructor support.

Prediction of Competence

We conducted a multiple regression to predict satisfaction of competence through perceived

Table 2. Hierarchical multiple regression of autonomy satisfaction as a function of instructor and advisor support, $N = 125$

Variable	<i>B</i>	<i>SE B</i>	β	<i>Sig.</i>
Step 1				
Instructors	.235	.076	.269	.002
(Constant)	3.872	.395	—	<.001
Step 2				
Instructors	.137	.075	.157	.070
Advisors	.306	.073	.361	<.001
(Constant)	2.797	.450	—	<.001

Table 3. Hierarchical multiple regression of relatedness satisfaction as a function of instructor and advisor support, $N = 125$

Variable	<i>B</i>	<i>SE B</i>	β	Sig.
Step 1				
Instructors	.275	.084	.283	.001
(Constant)	4.330	.439	—	<.001
Step 2				
Instructors	.201	.086	.207	.021
Advisors	.231	.084	.245	.007
(Constant)	3.519	.519	—	<.001

support from instructors and advisors. The two factors predicted 17% of competence: $R^2 = .173$, $F(2, 124) = 12.733$, $p < .001$. Beta weights for average perceived support from instructors ($\beta = .262$, $p < .01$) and advisors ($\beta = .252$, $p < .01$) were statistically significant; however, as shown in Table 1, perceived instructor support more strongly predicted competence. We found no evidence of mediation in this model.

Prediction of Relatedness

Finally, we applied multiple regression analysis to explore the extent to which perceived support from instructors and advisors predicted satisfaction of relatedness. The two-factor model significantly predicted 13% of relatedness: $R^2 = .134$, $F(2, 124) = 9.450$, $p < .001$. Examination of beta weights for each factor revealed that average perceived support from instructors ($\beta = .207$, $p < .05$) and advisors ($\beta = .245$, $p < .01$) were significant; as shown in Table 1, perceived advisor support was the stronger predictor. Closer examination of correlation values and beta weights for both predictors suggested a mediation effect.

We applied hierarchical regression to investigate possible mediation effects. Based on previous regression results, perceived advisor support was expected to mediate the relationship between perceived instructor support and relatedness. Hierarchical regression results shown in Table 3 indicated that prior to introducing data on perceived advisor support, the analysis revealed perceived instructor support as significant at the $p < .01$ level ($\beta = .283$); however, with the introduction of perceived advisor support, the significance of instructor support dropped ($\beta = .207$, $p < .05$). This drop (but not complete loss) in significance suggested a partial mediation by perceived advisor support on the relationship

between perceived instructor support and relatedness. Furthermore, perceived advisor support dropped in significance level within the model, from $\beta = .309$ ($p < .001$) to $\beta = .245$ ($p < .01$), revealing a partial mediation by perceived instructor support on the relationship between perceived advisor support and relatedness.

Discussion

Findings of the present study demonstrated positive correlations between instructor and advisor support and the satisfaction of students' basic psychological needs (i.e., autonomy, competence, and relatedness) as proposed by SDT (Deci et al., 1991; Deci & Ryan, 1980, 1985, 2000, 2002; Ryan & Deci, 2000a, 2000b). Although relationships were demonstrated between advisor and instructor support for satisfaction of the need for competence, the correlation with instructor support was stronger than for advisor support. However, results indicated stronger correlations between perceived support from academic advisors than from instructors with regard to meeting needs for autonomy and relatedness.

Regression analyses indicated that college student perceptions of instructor and advisor support differ in terms of predicting satisfaction of basic psychological needs as described by SDT. Support from advisors significantly predicted satisfaction of needs for autonomy (fully mediating instructor support as a predictor). Perceived support from instructors and advisors significantly predicted satisfaction of needs for competence; however, instructor support was a stronger predictor than advisor support. Similarly, perceived support from advisors and instructors significantly predicted satisfaction of the need for relatedness. Advisor support emerged as the stronger predictor of relatedness (with advisor and instructor support partially mediating one another in the model).

Satisfying Basic Needs Through Instruction and Academic Advising

Autonomy. Results from this study demonstrate that perceived support from academic advisors significantly predicted satisfaction of the student need for autonomy, with a full mediation of perceived instructor support by advisor support. This finding initially seems misaligned with extant research on autonomy-supportive classroom environments (e.g., Levesque et al., 2004); however, results support Lowenstein's (2005/2009) assertion that advising is a teaching and learning process, albeit with a different curriculum and pedagogy

than those of traditional instruction. Baxter Magolda's (2004) learning partnerships model elaborated on fostering self-authorship in students, and previous studies have linked academic motivation and retention to support of students in their development of goals and strategies for success (e.g., Demetriou, 2011; Lotkowski et al., 2004; Pizzolato, 2006). An autonomy-supportive advising relationship may provide a venue for teaching students to develop competencies related to volitional, self-directed decision making in college and beyond.

Competence. Findings indicate that the combination of perceived support from instructors and advisors predicted satisfaction of the student need for competence, with instructor support a stronger predictor than advisor support. In previous studies, scholars explored the relationship between instructor support and students' academic competence (e.g., Danielsen et al., 2009; Frymier & Houser, 2000; Gore, 2006; Patall et al., 2010; Reeve, 2006), and the present results support past findings indicating that interactions with instructors through specific courses predict academic competencies likely related to concept or subject mastery.

Additionally, our results show that perceived support from academic advising predicted the development of student self-efficacy beliefs, perhaps in relation to meeting long-term educational or career goals. These results align with findings of previous studies relating competence-supportive environments to student development of strategies that address the challenge of cohesively connecting various elements of the college experience to facilitate goal achievement (e.g., Borgard, 2009; Faye & Sharpe, 2008; Legault et al., 2006; Schunk & Zimmerman, 2006; Sheldon & Krieger, 2007).

Relatedness. The present study illustrates that advisor and instructor support predicted satisfaction of the student need for relatedness in the college environment. Out-of-class instructor support was previously linked to student feelings of connectedness and comfort with an educational institution as well as school persistence (Jones, 2008). However, advisor support was the stronger predictor of relatedness in the present study (with advisor and instructor support partially mediating one another in the model), suggesting that even though interactions with both academic personnel contribute to meeting student relatedness needs, advisors may have a greater opportunity than instructors to develop caring connections.

Habley and McClanahan (2004) found that students' educational outcomes are linked to their beliefs that someone at the institution cares about them as individuals. Although we did not explore student retention, our findings about perceived support and basic needs, as outlined by SDT (Deci et al., 1991; Deci & Ryan, 1980, 1985, 2000, 2002; Ryan & Deci, 2000a, 2000b), aligned with existing literature relating out-of-class support in an academic environment to student satisfaction with an institution, academic performance, and retention, particularly in groups with traditionally higher dropout rates (e.g., Beachboard et al., 2011; Oliver et al., 2010; Potts & Schultz, 2008; Robbins et al., 2004).

Limitations

This research contributes in novel ways to existing academic motivation and SDT literature with limitations apparent in two areas: measurement of motivation and potential overlap between rated instructors and advisors. We did not measure motivation in the present study, and further validation of basic psychological needs is necessary in relation to academic motivation. Neither did we aim to identify specific individuals, therefore in some cases, the same person may have been rated as both the student's instructor and advisor.

Implications and Future Research

Findings of our study have implications for the advancement of theory and practice related to academic support and motivation. Applications of SDT are expanded through exploration of relationships between perceived social support, basic need satisfaction, and academic motivation in college students. Educational professionals who espouse student success as a desired (and measurable) outcome may be inspired by this application of theory to enhance practice. The dual focus of the study (e.g., on support from instructors and advisors) helps to clarify shared and unique contributions of professionals who educate and support students to enhance academic motivation in and out of the classroom. Although the findings were statistically significant with regard to perceived support and basic psychological needs, they did not reveal other factors that may contribute to meeting student needs for autonomy, competence, and relatedness, leaving us to wonder: What other variables belong in a formula for academic support that optimally influences student motivation?

The findings are inextricably linked with suggestions for future research. For example, at the institution where we conducted the study, the culture of academic advising may have led to findings about advisor support that would differ from other locations. Future research could aim to replicate findings of the present study (contributing also to scale validation) with student populations from different institutions. As applications of SDT to academic advising (and more broadly, to college students) are relatively new, scholars could incorporate measures of intrinsic motivation to explore the link between basic psychological needs, advising, and other measurable outcomes (e.g., GPA and student retention).

The present inquiry resulted from professionals with different career specializations seeking to understand and collectively enhance their contributions to student success. The findings support institutional collaborations between instructors and advisors across academic units, leading to questions of ways administrators and institutions recognize and respond to the dual contribution of faculty members who also serve as academic advisors. What learning takes place through the advising process? How seriously do institutions take the potential or existing contributions of advisors to institutional objectives? Empirical literature offers little information about the complex relationship between advising, academic motivation, and student achievement; therefore, administrators seeking a better understanding of factors related to college student success may find that supporting collaborative advising research benefits students and institutions.

Summary

Students learn both in and out of the classroom, and this study highlighted the collaborative influence of instructors and academic advisors who contribute to the educational process. Findings support previous studies encouraging autonomy-supportive instruction and highlight the need to expand empirical investigation of the impact of advising on students and institutions. Although instructors and advisors employ different pedagogies and areas of emphasis in their teaching, they form a dynamic duo that significantly contributes to the satisfaction of basic psychological needs underlying students' academic motivation and goal achievement.

References

- Baxter Magolda, M. B. (2004). Learning partnerships model: A framework for promoting self-
 authorship. In M. B. Baxter-Magolda & P. M. King (Eds.), *Learning partnerships: Theory and models of practice to educate for self-authorship* (pp. 37–62). Sterling, VA: Stylus.
- Beachboard, M. R., Beachboard, J. C., Li, W., & Adkison, S. R. (2011). Cohorts and relatedness: Self-determination theory as an explanation of how learning communities affect educational outcomes. *Research in Higher Education, 52*(8), 853–874.
- Bitz, K. (2011). *Implementation of a first-year seminar: Retention and student views of advising and engagement at a small midwestern university* (Unpublished doctoral dissertation). Retrieved from ProQuest Dissertations and Theses (1024342272).
- Borgard, J. H. (2009). Toward a pragmatic philosophy of academic advising. *NACADA Journal, 29*(1), 43–46.
- Brewster, A. B., & Bowen, G. L. (2004). Teacher support and the school engagement of Latino middle and high school students at risk of school failure. *Child and Adolescent Social Work Journal, 21*(1), 47–67.
- Danielsen, A. G., Samdal, O., Hetland, J., & Wold, B. (2009). School-related social support and students' perceived life satisfaction. *The Journal of Educational Research, 102*(4), 303–318.
- Davis, J. (2010). Improving retention by focusing on first-generation students. *Recruitment & Retention in Higher Education, 24*(10), 3–6.
- Deci, E. L., & Ryan, R. M. (1980). The empirical exploration of intrinsic motivational processes. In L. Berkowitz (Ed.), *Advances in experimental social psychology* (Vol. 13) (pp. 39–80). New York, NY: Academic.
- Deci, E. L., & Ryan, R. M. (1985). *Intrinsic motivation and self-determination in human behavior*. New York, NY: Plenum.
- Deci, E. L., & Ryan, R. M. (2000). The “what” and “why” of goal pursuits: Human needs and the self-determination of behavior. *Psychological Inquiry, 11*(4), 227–268.
- Deci, E. L., & Ryan, R. M. (Eds.). (2002). *Handbook of self-determination research*. Rochester, NY: University of Rochester Press.
- Deci, E. L., & Ryan, R. M. (2008). Facilitating optimal motivation and psychological well-being across life's domains. *Canadian Psychology, 49*, 14–23.
- Deci, E. L., Vallerand, R. J., Pelletier, L. G., & Ryan, R. M. (1991). Motivation and

- education: The self-determination perspective. *Educational Psychologist*, 26(3-4), 325–346.
- Demetriou, C. (2011). The attribution theory of learning and advising students on academic probation. *NACADA Journal*, 31(2), 16–21.
- Erlich, R. J., & Russ-Eft, D. (2011). Applying social cognitive theory to academic advising to assess student learning outcomes. *NACADA Journal*, 31(2), 5–15.
- Faye, C., & Sharpe, D. (2008). Academic motivation in university: The role of basic psychological needs and identity formation. *Canadian Journal of Behavioural Science*, 40(4), 189–199. doi: 10.1037/a0012858
- Firmin, M. W., & MacKillop, L. M. (2008). Frequent major changing: Extrinsic and intrinsic factors. *NACADA Journal*, 28(2), 5–13.
- Frymier, A. B., & Houser, M. L. (2000). The instructor student relationship as an interpersonal relationship. *Communication Education*, 49, 207–219.
- Gore, P. A., Jr. (2006). Academic self-efficacy as a predictor of college outcomes: Two incremental validity studies. *Journal of Career Assessment*, 14(1), 92–115.
- Grasha, A. F., & Reichmann-Hruska, S. (1996). *Teaching styles survey*. Retrieved from <http://longleaf.net/teachingstyle.html>
- Guay, F., Senecal, C., Gauthier, L., & Fernet, C. (2003). Predicting career indecision: A self-determination theory perspective. *Journal of Counseling Psychology*, 50, 165–177.
- Habley, W. R., & McClanahan, R. (2004). *What works in student retention? All survey colleges* (ACT Research Report). Iowa City, IA: ACT.
- Ilardi, B. C., Leone, D., Kasser, T., & Ryan, R. M. (1993). Employee and supervisor ratings of motivation: Main effects and discrepancies associated with job satisfaction and adjustment in a factory setting. *Journal of Applied Social Psychology*, 23, 1789–1805.
- Jones, A. C. (2008). The effects of out-of-class support on student satisfaction and motivation to learn. *Communication Education*, 57(3), 373–388.
- Kallenbach, S., & Zafft, C. (2004). Attributional retraining: Rethinking academic failure to promote success. *National College Transition Network: Research to Practice*, 1, 1–3.
- Katz, I., Kaplan, A., & Gueta, G. (2010). Students' needs, teachers' support, and motivation for doing homework: A cross-sectional study. *The Journal of Experimental Education*, 78, 246–267.
- Lan, W., & Williams, A. (2005). Doctoral students' perceptions of advising style and development and the relationship between them. *NACADA Journal*, 25(1), 31–41.
- Legault, L., Green-Demers, I., & Pelletier, L. (2006). Why do high school students lack motivation in the classroom? Toward an understanding of academic amotivation and the role of social support. *Journal of Educational Psychology*, 98(3), 567–582.
- Levesque, C., Stanek, L. R., Zuehlke, A. N., & Ryan, R. M. (2004). Autonomy and competence in German and American university students: A comparative study based on self-determination theory. *Journal of Educational Psychology*, 96(1), 68–84.
- Lotkowski, V., Robbins, S., & Noeth, R. (2004). *The role of academic and non-academic factors in improving college retention* (ACT Policy Report). Retrieved from http://www.act.org/research/policymakers/pdf/college_retention.pdf
- Lowenstein, M. (2009). If advising is teaching, what do advisors teach? *NACADA Journal*, 29(1), 123–131. (Reprinted from *NACADA Journal*, 25[2], 2005, 65–73)
- National Research Council and Institute of Medicine. (2004). *Engaging schools: Fostering high school students' motivation to learn*. Washington, DC: The National Academies Press.
- Oliver, M., Ricard, R. J., Witt, K. J., Alvarado, M., & Hill, P. (2010). Creating college advising connections: Comparing motivational beliefs of early college high school students to traditional first-year university students. *NACADA Journal*, 30(1), 14–22.
- Patall, E. A., Cooper, H., & Wynn, S. R. (2010). The effectiveness and relative importance of choice in the classroom. *Journal of Educational Psychology*, 102(4), 896–915.
- Pizzolato, J. E. (2006). Complex partnerships: Self-authorship and provocative academic advising practices. *NACADA Journal*, 26(1), 32–45.
- Potts, G., & Schultz, B. (2008). The freshman seminar and academic success of at-risk students. *College Student Journal*, 42(2), 647–658.
- Reeve, J. (2006). Teachers as facilitators: What autonomy-supportive teachers do and why their students benefit. *Elementary School Journal*, 106, 225–236.

- Reeve, J., & Halusic, M. (2009). How K-12 teachers can put self-determination theory principles into practice. *Theory and Research in Education*, 7(2), 145–154.
- Reeve, J., & Jang, H. (2006). What teachers say and do to support students' autonomy during a learning activity. *Journal of Educational Psychology*, 98, 209–218.
- Robbins, S. B., Lauver, K., Le, H., Davis, D., Langley, R., & Carlstrom, A. (2004). Do psychosocial and study skills factors predict college outcomes? A meta-analysis. *Psychological Bulletin*, 130, 261–288.
- Ryan, R. M., & Deci, E. L. (2000a). Self-determination theory and the facilitation of intrinsic motivation, social development, and well-being. *American Psychologist*, 55(1), 68–78. doi:10.1037/0003-066X.55.1.68
- Ryan, R. M., & Deci, E. L. (2000b). The darker and brighter sides of human existence: Basic psychological needs as a unifying concept. *Psychological Inquiry*, 11(4), 319–338. doi:10.1207/S15327965PLI1104_03
- Schunk, D. H., & Zimmerman, B. (2006). Competence and control beliefs: Distinguishing the means and ends. In P. A. Alexander & P. H. Winne (Eds.), *Handbook of educational psychology* (pp. 349–367). Mahwah, NJ: Lawrence Erlbaum.
- Self-Determination Theory (n.d.a.). *Basic Needs Satisfaction in Life (General) Scale*. Retrieved from <http://www.selfdeterminationtheory.org/questionnaires/10-questionnaires/53>
- Self-Determination Theory (n.d.b.). *Subject Impressions Questionnaire*. Retrieved from <http://selfdeterminationtheory.org/edu/scales/category/5-intrinsic-motivation-inventory>
- Sheldon, K. M., & Krieger, L. S. (2007). Understanding the negative effects of legal education on law students: A longitudinal test of self-determination theory. *Personality and Social Psychology Bulletin*, 33(6), 883–897. doi:10.1177/0146167207301014
- Tinto, V. (1975). Dropout from higher education: A theoretical synthesis of recent research. *Review of Educational Research*, 45(1), 89–125.
- Tinto, V. (2005). Moving from theory to action. In A. Seidman (Ed.), *College student retention*. Westport, CT: American Council on Education and Praeger.
- Wentzel, K. R., Battle, A., Russell, S., & Looney, L. (2010). Social supports from teachers and peers as predictors of academic and social motivation. *Contemporary Educational Psychology*, 35, 193–202.
- Williams, G. C., & Deci, E. L. (1996). Internalization of biopsychosocial values by medical students: A test of self-determination theory. *Journal of Personality and Social Psychology*, 70, 767–779.
- Wiseman, C. S., & Messitt, H. (2010). Identifying components of a successful faculty-advisor program. *NACADA Journal*, 30(2), 35–52.
- Wolk, R. A. (2005). *It's kind of different: Student experiences in two early college high schools*. Retrieved from www.jff.org/sites/default/files/KindofDifferent2.pdf

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