Strengths-Based Advising Approaches: Benefits for First-Year Undergraduates

Krista M. Soria, University of Minnesota
Nicole L. Laumer, University of Minnesota
Dale J. Morrow, University of Minnesota
Garrett Marttinen, University of Minnesota

*We explored the benefits of strengths-based academic advising approaches for first-year students (*N = *1,228). We used propensity score matching techniques to create matched pairs of students who did and did not engage in strengths-based advising conversations with an advisor. First-year students who experienced strengths-based conversations had significantly higher rates of first-year retention and graduation in 4 years, levels of engagement, and academic self-efficacy than students who did not participate in these conversations. Focus groups of 21 advisors provided insights into strengths-based advising in 3 findings: strengths approaches facilitated advising relationships (thereby supporting students' engagement, retention, and graduation), enhanced students' self-awareness and confidence, and advanced advisors' own personal and professional development (thereby positively influencing student success).*

[doi:10.12930/NACADA-16-010]

KEY WORDS: academic advising, engagement, first-year students, graduation, retention, strengths, *StrengthsFinder*

A decade has passed since Schreiner and Anderson's (2005) paradigm-shifting article about strengths-based academic advising was published. During the time that followed, researchers investigated the utility of strengths-based approaches in higher education as potential catalysts for undergraduates' success and found that strengths-based approaches are associated with increases in student engagement and confidence (Soria & Stubblefield, 2014), sense of belonging (Soria & Stubblefield, 2015b), leadership development (Soria, Roberts, & Reinhard, 2015), and retention (Soria & Stubblefield, 2015a,b). The extended effects of strengths-based approaches apply to students' postgraduation experiences as well; for instance, college alumni who utilized their strengths in the workplace reported significantly higher job satisfaction, organizational commitment, and quality of life than their peers who did not use their strengths in the workplace (Tomkovick & Swanson, 2014). Hence, the benefits of strengths practices initiated in higher education persist into students' lives long after they graduate.

Framed within principles of positive psychology (Seligman & Csikszentmihalyi, 2000; Snyder, Lopez, & Pedrotti, 2010), strengths-based approaches are based on the belief that individuals achieve greater outcomes when they discover and develop their natural talents instead of solely mitigating their areas of weakness. Schreiner and Anderson (2005) connected strengths with academic advising in ground-breaking work that shifted the focus from problems to possibilities. They hypothesized that advisors who utilize strengths-based approaches in their advising practices awaken a renewed sense of motivation and engagement in students, resulting in students who possess and exhibit greater confidence, self-awareness, and the ability to face novel experiences in a complex, ever-changing society.

Despite these positive acclamations, to date, little research has emerged to support the claims about strengths-based advising. Therefore, we investigated the effectiveness of strengths-based academic advising approaches. To meet our first goal, an examination of the effects of strengths-based academic advising conversations as reported by students, we used quasi-experimental procedures (propensity score matching techniques) to construct control groups (students who did not engage in strengths-related conversations with advisors) and treatment groups (students who engaged in strengths-related conversations with advisors) similar to those created for randomized experiments. Our second goal, to investigate the effects of strengths-based advising conversations from the perspectives of advisors who apply these approaches, was explored through focus group discussions. In this paper, we address both perspectives to answer the following research question: What are the effects of strengths-based academic advising on first-year undergraduates'

engagement, academic self-efficacy, retention, and 4-year graduation rates?

Strengths-Based Approaches in Higher Education

Although many strengths-related assessments appear in the literature, we framed our research using the conceptualization of strengths put forth by Gallup, and in particular, we adopted the Clifton *StrengthsFinder 2.0* assessment (Gallup, 2017b), which along with a program of self-exploration known as *CliftonStrengths for Students* (formerly *StrengthsQuest*), also from Gallup (2017a), is used extensively in higher education. More than 2 million college students have taken the *StrengthsFinder* assessment, and several hundred colleges and universities use strengths programming. Some programs offered at postsecondary institutions include curricula embedded in first-year student orientation programs (Bowers & Lopez, 2010; Soria & Stubblefield, 2014), first-year experience courses (Stebleton, Soria, & Albecker, 2012), career development initiatives (Dik et al., 2015; Lopez, 2014), specific academic disciplines (Janke et al., 2015; Lorimer & Davis, 2015), and leadership development programs or courses (Lane & Chapman, 2011; Wisner, 2011), among other enterprises.

The Clifton *StrengthsFinder* (Gallup, 2017b) assessment leads individuals to discover their five most salient talent out of 34 themes—patterns of thoughts, feelings, and behaviors that, when refined with knowledge and skill, can be developed into strengths (Hodges & Harter, 2005). We reference the top five talent themes as *top five strengths*, because that phrase is typically attributed to them. Schreiner and Anderson (2005) suggested that advisors administer tools such as *StrengthsFinder* to help students identify their areas of greatest potential; however, they also recommended additional techniques and tools useful for this purpose.

In their innovative work, Schreiner and Anderson (2005) suggested several steps useful in a framework that integrates strengths into advising:

- help students to identify their strengths,
- affirm students' strengths and increase their appreciation of their unique strengths,
- discuss students' aspirations and determine the talent themes students wish to develop further,
- teach students that they can transfer their strengths to several areas of their lives,
- help students identify the types of environments that might help them flourish, and
- develop an action plan with students that they can take to meet their goals.

Although these frameworks are useful to practitioners—and researchers continue to investigate and unpack the benefits of using them with college students—Tomkovick and Swanson (2014) pointed to a "surprising scarcity of empirical research to support many of the purported benefits of a better understanding of one's strengths" (p. 198). The dearth of research on strengths-based approaches in the academic advising literature stands out starkly because in higher education advising offers the most potentially verdant spaces where students can receive the intensive and individualized support for the identification, development, and application of their strengths. Because of the critical importance of advising for students' success and retention (Soria, 2012; Young-Jones, Burt, Dixon, & Hawthorne, 2013), advisors who utilize strengths-based approaches may be advantageously poised to create the most positive impact on students' outcomes.

To ascertain whether strengths-based approaches in academic advising conversations are associated with student outcomes, we examined strengths-based approaches as enacted at a large, public, research university during the 2012-2013 academic year. The institution site of our study offered the *StrengthsFinder* assessment (Gallup, 2017b) to all incoming first-year students (N = 5,514), of whom approximately 96% (n = 5,309) completed the assessment to learn their top five strengths. Because of the large and decentralized nature of the institution, not all first-year students were exposed to strengths-based practices—including conversations with advisors—within their first year of enrollment.

Conceptual Framework

We used Astin's (1993) input-environment-output model as the conceptual framework for the study. The inputs within this model included students' pre-college characteristics, experiences, and demographics. The environment included experiences during higher education, and the outputs included outcomes of interest. Inputs can exert an influence on both environmental experiences and outcomes, which explains the reason

researchers commonly take inputs into consideration when building their statistical models. Indeed, to test the true impacts of environmental experiences, the direct effects of input variables on outcomes must be taken into account even as the potential effects of those input variables on the environmental variables are examined. In the case of students' use of academic advising services, for instance, self-selection bias may contribute to systematic differences between students who decide to meet with advisors and those who do not meet with advisors.

To attempt to reduce some of those self-selection biases, at least in part, educational researchers frequently use quasi-experimental designs in analyses. In most experimental studies, they randomly assign participants to a control and a treatment group to test the effects of the treatment. While these randomized controlled trials are considered the gold standard approach for estimating the effects of treatments (Austin, 2011), such randomization often cannot be achieved in educational settings. In cases of impractical randomization, quasi-experimental techniques are used to simulate the characteristics of experimental designs. In the quasi-experimental design, groups of students are matched according to variables such that only the treatment (specified experience) differs between the two groups (Melguizo, Kienzl, & Alfonso, 2011); in this case, the treatment consisted of advisees' discussions of their strengths with an advisor. Using quasi-experimental design methods, researchers match students on the basis of pretreatment characteristics that approximate randomization by balancing the observable characteristics between the treatment and control groups (Becker & Ichino, 2002). The results can help researchers better estimate the effects of treatments on outcomes with a greater degree of accuracy. Therefore, in the study, we utilized propensity score matching techniques to estimate the effects of first-year students' strengths-related discussions with advisors.

In addition, to expand our understanding of the strengths-based approaches used in academic advising conversations, we conducted six focus groups to hear advisor perspectives on benefits they perceived about strengths-based conversations with their advisees. We present our methods and results according to Phase 1 (students' survey) and Phase 2 (advisors' focus groups) of the study.

Methodology

Phase 1: Student Survey Data Analysis

Procedures. At the end of the academic year, all first-year students ($N = 5{,}514$) were invited to participate in an online survey regarding their strengths-related interactions. We offered a lottery incentive for participants in the form of a chance to win one of four $25 university-bookstore gift certificates. In the survey, students were asked to assess their strengths-based interactions, academic self-efficacy, engagement, and other personal beliefs and characteristics. We received institutional review board approval to conduct this study and administer the survey to first-year students.

Participants. The original student response rate for the survey was 27.33% ($n = 1{,}507$). Of these students, 59.3% ($n = 893$) indicated that they engaged in at least one strengths conversation with an advisor during the academic year. Because of the propensity score methods utilized in the analyses, the final sample of matched treated and untreated pairs was reduced ($n = 1{,}228$). Of those students, 65.1% are female ($n = 800$) and 34.9% are male ($n = 428$). In addition, 1.1% identified as Native American or American Indian ($n = 14$), 11.5% as Asian ($n = 141$), 2.0% as Black ($n = 24$), 0.5% as Hawaiian ($n = 6$), 2.1% as Hispanic ($n = 26$), 4.2% as international ($n = 52$), and 78.5% as White ($n = 965$). White and female students were slightly overrepresented compared to the university first-year population, which was 50.7% female and 74.9% White.

Measures. We took three types of measurements in this study. These measures were based on student responses to items related to demographics, the dependent variables, and specific strengths-based interactions with advisors.

Covariate measures. The covariate measures utilized for propensity score matching analyses were intentionally selected because of their potential relationships to students' use of academic advising and the dependent measures (Table 1). These measures included data on students' race and ethnicity, sex, college of enrollment, socioeconomic status as measured by Pell-grant status, and incoming ACT or SAT scores (Bozick, 2007; Jones-White, Radcliffe, Huesman, & Kellogg, 2010; Miller & Herreid, 2008; Soria & Stubblefield, 2014). We included measures related to students' participation in Access to Success, a small advising community created to increase the retention of students from underrepresented

Table 1. Descriptive statistics of covariate measures

Measure	*n*	%
Pell Grant Recipient	258	21.0
Pell Grant Nonrecipient	970	79.0
College of Biology	98	8.0
College of Design	49	4.0
College of Agricultural Sciences	56	4.6
College of Liberal Arts	513	41.8
College of Engineering	240	19.5
College of Business	154	12.5
College of Education	118	9.6
Access to Success Participant	78	6.4
Not an Access to Success Participant	1,150	93.6
	M	*SD*
ACT Scores	27.99	3.40
Value of Strengths	3.48	1.24
Proportion of Strengths Discussions Initiated	2.65	1.17

Note. SAT scores were converted to ACT scores.

backgrounds (Soria, Lingren Clark, & Coffin Koch, 2013).

Finally, we sought to control for students' enthusiasm for the strengths program because this factor may lead students to initiate strengths-based discussions in academic advising conversations on their own. To this end, we asked students to rate (1= *strongly disagree* to 5 = *strongly agree*) their agreement that strengths had value for them and the proportion of strengths discussions that they had initiated without prompting from the advisor (1= *none* to 5 = *all*).

Dependent measures. We used four dependent variables: first-year students' engagement, academic self-efficacy, first-to-second year retention rates, and rate of graduation in 4 years. To measure students' engagement, we used a 12-item assessment known as the *College Student Engagement Scale*, an instrument based on *Gallup Q12*, which was designed to measure attitudinal outcomes and engagement levels (Harter, Schmidt, Killham, & Agrawal, 2009). The scale asks students to rate their agreement (1 = *strongly disagree* to 5 = *strongly agree*) on a variety of items (e.g., "At this school, I have the opportunity to do what I do best every day"). The instrument has been shown to demonstrate strong reliability ($\alpha = .90$) (Soria & Stubblefield, 2014), a finding also replicated in this study ($\alpha = .91$).

We used an 8-item measure of academic self-efficacy developed by Chemers, Hu, and Garcia (2001). Students were asked to rate their agreement with statements reflecting confidence in their ability to perform optimally on academic tasks (1 = *very untrue* to 7 = *very true*). Soria and Stubblefield (2015a) reported the measure as internally consistent ($\alpha = .85$) and, in this study, the measure also showed high reliability ($\alpha = .85$).

We obtained data from the Office of Institutional Research regarding students' retention from their first to their second year of enrollment and their graduation in 4 years. The average rate of student retention at this institution was 90.4%, and within the sample reduced by graduation rates, the average retention rate was slightly higher at 94.6%. The 4-year graduation rate was 65.3% for the institutional population and 81.92% for the survey sample.

Strengths discussions with an advisor. In the survey, we asked students whether they had a strengths-related conversation with an advisor during the academic year. As noted, over one half (59.3%, $n = 893$) of students indicated that they had engaged in at least one strengths-based conversation with an advisor during the academic year. Using this result and propensity score techniques, we created the treatment and control variables, discussed strengths with an advisor and did not discuss strengths with an advisor, respectively. We found one notable difference between students who discussed strengths with an advisor and those who did not engage in strengths-based discussions: A higher percentage of education and business students reported experiencing strengths-based discussions. Both the College of Education and the Business College had adopted strengths initiatives early and remain strong supporters of strengths-based approaches. We observed no other demographic differences between students who reported a strengths conversation with an advisor and those who did not report experience with these conversations.

Analysis. We utilized propensity score matching techniques in SPSS 23.0 according to procedures outlined by Thoemmes (2012). We initiated the study by using binary logistic regression to compute propensity scores for individual students. Next, we used 1:1 nearest neighbor matching without replacement, meaning that data from each student in the treatment condition were matched to data from a student in the control population with the most similar estimated propensity score. We discarded all data units that fell outside of the area

of common support to avoid extrapolation to students who were so dissimilar that no comparisons could be made between them (Thoemmes, 2012).

We checked whether the matching procedures balanced the distribution of variables in both the treatment and control groups. Specifically, we looked at standardized mean differences (the mean differences between the two groups divided by the standard deviation of the control group) in the treatment and control groups before and after matching. We detected no large imbalances (greater than .25) after matching in each analyses, and these findings meet the threshold suggested by Rosenbaum and Rubin (1985). These results imply that, before matching procedures were implemented, the covariates within the treatment and control groups differed significantly. These results also reveal that the propensity score matching decreased bias by making the observed and treatment groups more similar with regard to covariates.

To test whether strengths-related discussions are associated with students' engagement and academic self-efficacy (continuous variables), we used linear regression analyses. We included the propensity scores as controls to remove the correlation component from the assignment process (Melguizo et al., 2011). In the end, we utilized binary logistic regression to examine the relationships between first-year students' strengths discussions with advisors and their second-year retention and 4-year graduation rates. As in the other models we created, we included students' propensity scores as control variables in the analyses. Whereas beta coefficients, standard errors, and significance levels are commonly used to describe the results of ordinary least squares regression, odds ratios—which are calculated by exponentiating the beta coefficient (e^{β})—are used in logistic regression to explain the way a change in an independent variable influences the dependent variable when other variables are held constant (Cragg, 2009; Hosmer & Lemeshow, 2000). In the context of the present study, the odds ratio value indicates the odds of reenrollment in the second year of higher education (the odds of graduating in 4 years over not graduating) for every one-unit increase in an independent variable when other variables are held constant.

Phase 2: Advisors' Perspectives

Procedures and participants. We recruited 21 academic advisors for six focus groups held during the 2012-2013 academic year by sending an e-mail to all on-campus advisors through a central academic advising e-mail list. We provided advisors a meal as an incentive for their attendance. The advisors recruited for the focus groups included 5 men and 16 women, who had held primary positions as academic advisors for undergraduates. The advisors were well represented among the seven largest first-year student-admitting colleges at the university. Each focus group lasted approximately 1 hour and the participants were asked the same series of questions, including, for example, the following:

- Do you discuss strengths with students?
- What are students' reactions to the strengths conversations you have? and
- To what extent, if any, do you see an impact of these strengths conversations on your advisees?

A graduate student assistant transcribed audio recordings from the six focus groups, which yielded 101 single-spaced pages of text.

Analyses. We individually reviewed each focus-group transcript and identified key codes, themes, or potential areas of interest. We convened to discuss our coding schemes, and in the process of integrating the data and refining the categories, central themes emerged that explained relationships among the data. We built these central themes by gleaning "bits and pieces of information" that were "combined and ordered into larger themes as the researcher works from the particular to the general" (Merriam, 2009, p. 15). Within group meetings, we sorted and reviewed themes for similarities and differences until the point of saturation, defined as the time during the process when additional analysis does not offer any additional insight (Creswell, 2007). We used direct quotes to authenticate the findings (Merriam, 2009). Each of member of our research team verified the codes and themes in a step that enhanced the validity of the analyses (Creswell, 2007). We also represented participants' experiences using rich description involving numerous direct quotes from students' responses (Creswell, 2007).

Results

Phase 1: Student Survey Data Analysis

The results of the first linear regression predicting students' engagement suggested that students who discussed their strengths with an

Table 2. Results of regression models predicting student outcomes

Predictor	Engagement β	Academic Self-efficacy β	Retention e^{β}	Graduation e^{β}
Strengths Discussion with Advisor	.088***	.126***	1.530***	1.903***
Propensity Score	.227***	.007	1.02	1.31*

Note. *$p < .05$. ***$p < .001$.

advisor at least once in the academic year had experienced significantly higher engagement, on average, than their peers who did not engage in a strengths-based discussion with an advisor ($\beta = .088$, $p < .001$) (Table 2). The variables entered into the analyses (discussing strengths with an advisor and the propensity scores) explained 8.2% of the variance in students' engagement measures.

The results of the second linear regression predicting students' academic self-efficacy suggested that students who discussed their strengths with an advisor at least once in the academic year reported significantly higher levels of academic self-efficacy, on average, than study participants who had not engaged in a strengths-based discussion with an advisor ($\beta = .126$, $p < .001$). The variables entered into the analyses (discussing strengths with an advisor and the propensity scores) explained 1.7% of the variance in students' academic self-efficacy.

The results of the first logistic regression analysis show that students who discussed their strengths with an advisor were significantly more likely to enroll for a second year at the university. Specifically, the results suggest that students who discussed strengths with an advisor were 1.530 times more likely to return for their second year of enrollment ($e^{\beta} = 1.530$, $p < .001$). The variables entered into the analyses revealed that the factors they represented exerted little influence on students' retention (pseudo-R^2 values of .040) as per Nagelkerke (1991).

The results of the final logistic regression analysis we conducted suggest that students who discussed their strengths with an advisor were significantly more likely to graduate in 4 years than their peers who did not engage in a strengths-based conversation with an advisor in their first year of enrollment. The results indicate that students who discussed strengths with an advisor were 1.903 times more likely to graduate in 4 years ($e^{\beta} = 1.903$, $p < .001$) than those who had not engaged in strengths-based discussions. As in the first model we analyzed, the variables entered into the analyses reflected factors that exerted little influence on students' graduation (pseudo-R^2 values of .050) as per Nagelkerke (1991).

Phase 2: Advisors' Perspectives

The results of the qualitative data analyses revealed several primary themes that may help advance the understanding of the effects of strengths-based advising conversations on students' retention, graduation, engagement, and academic self-efficacy. Several advisors discussed the ease with which they were able to build relationships with students, thus supporting advisee engagement, retention, and graduation. Advisors believed that strengths-based conversations helped students with their development of confidence and in taking ownership over their academic success. Also, advisors discussed using strengths approaches within their own advising circles for professional development; thus, through modeling strengths-based practices in their own professional work, advisors who embraced strength-based approaches benefited their advisees.

Establishing advising relationships and enhancing engagement. One advisor suggested that academic advising contexts offer the best places on campus to engage in strengths-based conversations, noting that "advising conversations are often the most intimate and personal conversations students have with any staff on campus, even compared with faculty, although they may see faculty more often." Another advisor explained that strengths approaches "lay a foundation for students" to enter into positive advising relationships: "We are in this together. I am here to support your goals. I am here to help you learn more about yourself, but also affirm that you are unique." Addressing the ways in which strengths awakened students to new, positive aspects of themselves, another advisor argued that strengths help students who were "struggling with, you know, seeing where they fit on campus, and so I think that is a

helpful tool to affirm who they are and the possibilities for where they are going."

One advisor explained that acknowledgment of strengths "enriches advising because it helps with relationship building, and then hopefully students know that there is someone on campus that cares about them and wants to learn about and help them grow and develop." Another related that strengths discussions help students to "feel like you are their advocate—they see you connect with them as their advocate in a welcoming space." To build these relationships, advisors often shared their own personal stories of using or developing their own strengths. Four advisors also saw the potential for strengths approaches to help students connect not only with advisors but also with other students at the university; for instance, one advisor suggested,

> I think [a strengths approach] does help them build relationships with their classmates and others who are pursuing the same major. So every time they get to know each other . . . it's like an affirmation of "I see *this* about you, I am going to remember *this* about you."

Another advisor pointed out: "If someone knows something about you, it enhances the relationship and it makes you feel like you belong in the community. It leads to retention, and it has ripple effects beyond the first year."

We hypothesized that when they can more quickly develop personal relationships with academic advisors and their classmates by viewing situations through a strengths-based lens, students may feel more engaged because they feel validated and supported by critical institutional representatives. When they know their students' strengths, advisors can encourage students to connect with opportunities to perform at their best every day in curricular and cocurricular experiences; this involvement leads to more and greater ways to maintain retention and graduation because students feel more connected to their institutions through the social support they receive from advising (Jones, 2010).

Enhanced self-awareness and confidence. All of the advisors in the focus groups discussed the benefits of strengths in relation to students' self-awareness and enhanced self-confidence. One advisor stated, "Strengths get students on the path of identity and reflection in a more meaningful way that wouldn't exist if they didn't get exposed to the vocabulary, the more positive way of speaking about themselves." Another advisor remarked that leveraging strengths "gives student their own voice" and helps them to see "what they are good at and how they can apply those qualities in different ways, which empowers them once they know more about their own strengths and what they bring to make decisions."

More than one half the advisors in the focus groups noted the potential for strengths-based advising to help students with major and career selection processes; for instance, one advisor suggested, "When students know their strengths, they can use their strengths in the decision-making process rather than simply choosing a major to fit their strengths, as all strengths are great in all fields." Nine other advisors framed strengths approaches in terms of the potential to empower students to take responsibility for their education and future. As one advisor explained the advantages of strengths-based approaches:

> I think it helps to empower the students and take over or shift over and experience that they are up to take on and whether it is choosing a major or taking classes or developing a plan for four years down the road. It helps them have some level of ownership.

Another advisor suggested that knowledge of strengths helps students to "form and own their own brand that can be applied to their choice of a major, in the classroom, or beyond graduation and working in their job." This ownership, we hypothesized, leads to enhanced confidence and academic self-efficacy; that is, students feel prepared and capable of achieving academic tasks and fulfilling their academic potential. In return, this confidence can lead to greater retention and graduation rates (Chemers et al., 2001).

Trickle down effects: Strengths as professional development for advisors. While all 21 advisors were asked to discuss the potential benefits of strengths for undergraduates, 5 also openly discussed the benefits of a strengths approach for them personally. These 5 advisors recounted that they more enthusiastically utilized strengths approaches in their advising after learning, understanding, and applying strengths concepts in their daily lives. For instance, one advisor related, "It is like peeling back another layer of understanding of myself," and echoing those sentiments, another advisor said,

> I know that helped me in my personal life in that way and also communicating to potential employers: It gave me vocabulary to talk about what I think I am good at so I use my personal experience in that way too, to talk to students about it.

Advisors benefited personally from using a strengths approach, noting that their interactions with colleagues and that team dynamics improved after incorporating strengths approaches within their units, departments, or colleges. One advisor articulated the benefits of strengths-based approaches for advisors:

> I think [a strengths approach] gives us common language, and I think that is huge. Without it, there wouldn't be those conversations. I think it is good for staff development. I work with a team of advisors, and I ask new advisors each year to take their strengths assessment. So, then, even in the way we organize our work we have a shared language, and it helps us focus on what we like doing best, and then it helps us connect with our students and with other people who aren't even in our units.

Another related,

> I would agree on that staff development piece. . . . The more we can develop ourselves, the more we develop ourselves for students, and not only the direct interactions in advising appointments, but also in terms of coworker and team dynamics.

We hypothesize that these enhanced professional development opportunities trickle down to students, who benefit by observing positive self-development, reflection, and self-awareness modeled by academic advisors (Guthrie, Woods, Cusker, & Gregory, 2005).

Discussion and Limitations

The results of the first phase of our study—the quantitative analyses—suggest that first-year undergraduates who engage in strengths-related discussions with their advisors had significantly ($p < .05$) higher levels of engagement, demonstrated significantly ($p < .05$) greater academic self-efficacy, and had significantly ($p < .05$) higher rates of retention and graduation than their peers who did not engage in strengths-related conversations. The results lend weight to Schreiner and Anderson's (2005) proposition that strengths, when identified and utilized in academic advising settings, can yield great benefits for students. The results also align with prior research that explored the benefits of strengths-based approaches on student outcomes such as engagement, self-efficacy, retention, and graduation; this study particularly supports assertions about the powerful impact of strengths-based academic advising conversations (Soria & Stubblefield, 2014, 2015a, b).

In addition, the results of the second phase of the study—the qualitative analyses of the focus group data—suggest that advisors who leveraged strengths in their own work believe that strengths-based approaches serve as a bridge to establish more immediate advising relationships with students. The results also extend the literature in the field by pointing toward the potential benefits of strengths-based advising approaches to advisors' own personal and professional development. Furthermore, advisors who apply their own strengths in practice reported their belief that students can use their own strengths to develop confidence, a sense of empowerment, and connections to others—findings that we hypothesized would lead to enhanced engagement, improved academic self-efficacy, and higher retention and graduation rates.

To the survey given to advisees, 88% of students responded with somewhat to strong agreement that knowing their strengths has positively affected their selection of an academic major, and 82.6% somewhat or strongly agreed that knowing their strengths helped them in thinking about potential career paths. We also hypothesized that these factors help to promote students' retention and eventual graduation from the university; however, future research is needed to investigate the potential relationships between strengths-based practices and the student outcomes hypothesized in the study.

Although the results of the quantitative and qualitative analyses are encouraging, several limitations to the present study need acknowledgment. For instance, the study was conducted at a large, urban, public, research-extensive university, which may limit the generalizability of the findings to this institutional context. Because all first-year students were invited to complete the *StrengthsFinder* assessment (Gallup, 2017b), and several departments on campus offered strengths-related programming (e.g., in housing and

residence life), the potential effectiveness of strengths in the academic advising contexts cannot be isolated. Furthermore, the variables used in the regression models predicted only very small amounts of variance in the dependent variables, suggesting several variables may more strongly predict students' engagement, self-confidence, and retention. The coefficients in the models also suggest weak relationships between strengths-based discussions and student outcomes. Researchers should include additional measures in their models to more fully capture students' experiences—a step that may help to isolate better the effects of specific strengths-based approaches on student outcomes.

In addition, advisors self-selected to join the focus groups and understood in advance that they would be discussing strengths-based approaches and potential benefits for students. Therefore, the advisors who chose to participate may favor strengths-based approaches; however, several advisors stated that they chose to attend the focus groups because they did not use strengths-based approaches and wished to use the opportunity to learn from other advisors the ways to incorporate strengths into their practice. The results of both the quantitative and qualitative analyses should be interpreted in light of these limitations.

Recommendations

We recommend that colleges and universities invest in their students—and advisors—by providing them with tools to help them gain awareness of their strengths. Along with investment in tools or assessments, we recommend that administrators seek to institutionalize strengths-based practices by offering educational training opportunities to staff and faculty members seeking to implement strengths in their daily practices with students (Soria & Stubblefield, 2015a). Like Schreiner and Anderson (2005), we also believe that the advising relationship offers one of the best tools to help undergraduates identify, affirm, and develop their own strengths, so we recommend that institutions place a special emphasis on integrating strengths-based educational opportunities in academic advising contexts.

Additional recommendations we drew from some of the strengths-development strategies that advisors on this campus employed include the following directives for administrators and advisors:

- keep an institutional repository of strengths so that advisors can look up students' strengths and revisit them during advising appointments;
- use interactive conversations as means to elicit students' critical thinking about their strengths;
- allow students flexibility to claim their own strengths; and
- help students envision, using their strengths, to make decisions or tackle obstacles in academic-, personal-, or career-related contexts.

Asking students to identify how they can use their own strengths to meet their goals and affirming students' unique strengths as they are used in action can further encourage and empower students to overcome challenges. These strategies also make students feel welcome in their campus communities as they connect to other students.

Finally, additional research on the effectiveness of strengths-based approaches should take priority on college campuses within different institutional contexts and among underrepresented groups of students. Although we examined a few important outcomes in this paper, additional areas critical to student success should be explored—including the potential longitudinal impacts of strengths-based approaches on students' career development and satisfaction beyond higher education.

Conclusion

In conclusion, the results of this study highlight the potential benefits of strengths-based approaches in academic advising relationships. We employed rigorous methodology in our analyses to test the effects of strengths-based academic advising conversations and collected data from advisors related to their perceptions of the benefits of strengths for students. Although more work needs to be undertaken to continue to shift prevailing paradigms of deficits and problems to those of strengths and possibilities, we argue that strengths-based approaches present actionable opportunities to help students develop confidence, engage in their educational experience, and ultimately to achieve their educational goals.

References

Astin, A. W. (1993). *What matters in college: Four critical years revisited*. San Francisco, CA: Jossey-Bass.

Austin, P. C. (2011). An introduction to propensity score methods for reducing the effects of

confounding in observational studies. *Multivariate Behavioral Research, 46*(2), 399–424.

Becker, S. O., & Ichino, A. (2002). Estimation of average treatment effects based on propensity scores. *Stata Journal, 2*(4), 358–377.

Bowers, K. M., & Lopez, S. J. (2010). Capitalizing on personal strengths in college. *Journal of College and Character, 11*(1), 1–11.

Bozick, R. (2007). Making it through the first year of college: The role of students' economic resources, employment, and living arrangements. *Sociology of Education, 80*(3), 261–284.

Chemers, M. M., Hu, L., & Garcia, B. F. (2001). Academic self-efficacy and first-year college student performance and adjustment. *Journal of Educational Psychology, 93*(1), 55–64.

Cragg, K. M. (2009). Influencing the probability for graduation at four-year institutions: A multi-modal analysis. *Research in Higher Education, 50*, 394–413.

Creswell, J. W. (2007). *Qualitative inquiry and research design: Choosing among five approaches* (2nd ed.). Thousand Oaks, CA: Sage.

Dik, B. J., Duffy, R. D., Allan, B. A., O'Donnell, M. B., Shim, Y., & Steger, M. F. (2015). Purpose and meaning in career development applications. *The Counseling Psychologist, 43*(4), 558–585.

Gallup. (2017a). *CliftonStrengths for Students*. Retrieved from https://www.strengthsquest.com/205382/cliftonstrengths-students.aspx

Gallup. (2017b). *StrengthsFinder Assessment 2.0*. Retrieved from http://www.gallup.com/products/170957/clifton-strengthsfinder.aspx

Guthrie, V. L., Woods, E., Cusker, C., & Gregory, M. (2005). A portrait of balance: Personal and professional balance among student affairs professionals. *College Student Affairs Journal, 24*(2), 110–127.

Harter, J. K., Schmidt, F. L., Killham, E. A., & Agrawal, S. (2009). *Q12 meta-analysis: The relationship between engagement at work and organizational outcomes*. Omaha, NE: Gallup.

Hodges, T. D., & Harter, J. K. (2005). A review of the theory and research underlying the *StrengthsQuest* program for students. *Educational Horizons, 83*(3), 190–201.

Hosmer, D. W., & Lemeshow, S. (2000). *Applied logistic regression* (2nd ed.). New York, NY: Wiley-Inter-Science.

Janke, K. K., Farris, K. B., Kelley, K. A., Marshall, V. D., Plake, K. S., Scott, S. A., … Yee, G. C. (2015). *StrengthsFinder* signature themes of talent in Doctor of Pharmacy students in five Midwestern pharmacy schools. *American Journal of Pharmaceutical Education, 79*(4), 1–9.

Jones, W. A. (2010). The impact of social integration on subsequent institutional commitment conditional on gender. *Research in Higher Education, 51*(7), 687–700.

Jones-White, D. R., Radcliffe, P. M., Huesman, R. L., & Kellogg, J. P. (2010). Redefining student success: Applying different multinomial regression techniques for the study of student graduation across institutions of higher education. *Research in Higher Education, 51*(2), 154–174.

Lane, F. C., & Chapman, N. H. (2011). The relationship of hope and strength's self-efficacy to the social change model of leadership. *Journal of Leadership Education, 10*(2), 116–137.

Lopez, S. J. (2014). A good job is hard to find . . . until students know what they do best. *About Campus, 19*(1), 2–6.

Lorimer, S., & Davis, J. A. (2015, June). *Using strengths of first-year engineering students to enhance teaching*. Paper presented at the American Society for Engineering Education, Seattle, WA.

Melguizo, T., Kienzl, G. S., & Alfonso, M. (2011). Comparing the educational attainment of community college transfer students and four-year college rising juniors using propensity score matching methods. *The Journal of Higher Education, 82*(3), 265–291.

Merriam, S. B. (2009). *Qualitative research: Guide to design and implementation*. San Francisco, CA: Jossey-Bass.

Miller, T. E., & Herreid, C. H. (2008). Analysis of variables to predict first-year persistence using logistic regression analysis at the University of South Florida. *College & University, 83*(3), 2–11.

Nagelkerke, N. J. D. (1991). A note on a general definition of the coefficient of determination. *Biometrika, 78*, 691–692.

Rosenbaum, P. R., & Rubin, D. B. (1985). Constructing a control group using multivariate matched sampling methods that incorporate the propensity score. *American Statistician, 39*(1), 33–38.

Schreiner, L. A., & Anderson, E. (2005). Strengths-based advising: A new lens for

higher education. *NACADA Journal, 25*(2), 20–29.

Seligman, M. E. P., & Csikszentmihalyi, M. (2000). Positive psychology: An introduction. *American Psychologist, 55*(1), 5–14.

Snyder, C. R., Lopez, S. J., & Pedrotti, J. T. (2010). *Positive psychology: The scientific and practical explorations of human strengths*. New York, NY: Sage.

Soria, K. M. (2012, October 31). Advising satisfaction: Implications for first-year students' sense of belonging and retention. *The Mentor: An Academic Advising Journal*. Retrieved from http://dus.psu.edu/mentor/2012/10/advising-satisfaction/

Soria, K. M., Lingren Clark, B., & Coffin Koch, L. (2013). Investigating the academic and social benefits of extended new student orientations for first-year students. *The Journal of College Orientation and Transition, 20*(2), 33–45.

Soria, K. M., Roberts, J., & Reinhard, A. (2015). Undergraduate students' strengths awareness and leadership development. *Journal of Student Affairs Research and Practice, 52*(1), 89–103.

Soria, K. M., & Stubblefield, R. (2014). First-year college students' strengths awareness: Building a foundation for student engagement and academic excellence. *Journal of the First-Year Experience and Students in Transition, 26*(2), 69–88.

Soria, K. M., & Stubblefield, R. (2015a). Building a strengths-based campus to support student retention. *Journal of College Student Development, 56*(6), 626–631.

Soria, K. M., & Stubblefield, R. (2015b). Knowing me, knowing you: Building strengths awareness and belonging in higher education. *Journal of College Student Retention: Research, Theory, and Practice, 17*(3), 351–372.

Stebleton, M. J., Soria, K. M., & Albecker, A. (2012). Integrating strengths-based education into a first-year experience curriculum. *Journal of College and Character, 13*(2), 1–8.

Thoemmes, F. J. (2012). *Propensity score matching in SPSS*. Retrieved from http://arxiv.org/ftp/arxiv/papers/1201/1201.6385.pdf

Tomkovick, C., & Swanson, S. (2014). Using *Strengthsfinder* to identify relationships between marketing graduate strengths and career outcomes. *Marketing Education Review, 24*(3), 197–211.

Young-Jones, A. D., Burt, T. D., Dixon, S., & Hawthorne, M. J. (2013). Academic advising: Does it really impact student success? *Quality Assurance in Education, 21*(1), 7–19.

Wisner, M. D. (2011). Psychological strengths as predictors of effective student leadership. *Christian Higher Education, 10*(3–4), 353–375.

Authors' Notes

Krista M. Soria is an analyst with the Office of Institutional Research at the University of Minnesota and adjunct faculty at the University of Minnesota, St. Cloud State University, and St. Mary's University of Minnesota. She can be reached at ksoria@umn.edu

Dale Morrow recently graduated from the University of Minnesota with a bachelor's degree in Sociology and a minor in Leadership. He is a graduate student pursuing a master's degree in higher education administration at the University of Kansas.

Nicole Laumer recently graduated from the University of Minnesota with a bachelor's degree in Human Resource Development and a minor in Leadership.

Garrett Marttinen is an undergraduate student at the University of Minnesota pursuing a minor in Leadership.