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Alan M. Schwitzer, Catherine B. Moss, Shana L. Pribesh, Dan J. St. John, Dana
D. Burnett, Lenora H. Thompson, Jennifer J. Foss

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Students With Mental Health Needs: College Counseling Experiences and Academic Success

Alan M. Schwitzer
Dana D. Burnett

Catherine B. Moss
Lenora H. Thompson

Shana L. Pribesh
Jennifer J. Foss

Dan J. St. John

In this study, we examined college counseling experiences and academic outcomes. About 10% of college students seek counseling for mental health needs, and many would be unable to persist without support. Building on previous research, we found that participating in counseling was beneficial to academic success. Students who visited the counseling center and then remained in counseling as recommended were more likely to experience GPA increases and graduate than were their peers who either did not complete further counseling after their first visit or were referred off campus. Attending a greater number of sessions appeared to have greater benefits. We discuss implications for professionals across campus.

Previous researchers have documented a high prevalence of mental health concerns and a steady high demand for counseling services among today's college students (Fink, 2014; Kirsch, Doerfler, & Truong, 2015). Students present complex concerns that are disruptive to their college experience (Fink, 2014). In fact, an estimated 10.4% of today's students visit college counseling centers for mental health needs—and many of these students might be unlikely to achieve successful academic outcomes without counseling support (Gallagher, 2013). Therefore, we undertook the current study to more fully

understand counseling center outcomes on student academic experiences.

Counseling Concerns and Academic Performance

College students encounter a wide range of concerns, some of which fall within the student mental health domain. Specifically, a student's problems often fall in the mental health domain when they interfere with daily health and wellness and the student experiences distress or difficulties in functioning in important areas of college adjustment (American Psychiatric Association [APA], 2013; Schwitzer & Van Brunt, 2015). Such mental health needs have the potential to interfere with educational success (Choi, Buskey, & Johnson, 2010; Lee, Olson, Locke, Michelson, & Odes, 2009). High levels of psychological distress during the college years, personal problems, and problematic behavioral health issues all have been associated with declines in academic performance (Choi et al., 2010; Hartley, 2011). For example, Alschuler, Hoodin, and Byrd (2009) found that counseling-related problems “directly affect a student's ability to perform well in school,” with almost 15% of students in their study reporting depression, anxiety, or other mental health problems as “causes of academic difficulty” (p. 177). In response, counseling supports range from preventing

Alan M. Schwitzer is Professor of Counseling and Human Services; Catherine B. Moss is Associate Director of the Student Success Center; Shana L. Pribesh is Associate Professor of Educational Foundations and Leadership; Dan J. St. John is Adjunct Assistant Professor of Counseling and Human Services; Dana D. Burnett is Professor of Educational Foundations and Leadership; Lenora H. Thompson is Director of the Office of Student Counseling; and Jennifer J. Foss is Director of the Student Health Center; all at Old Dominion University.

the onset of such personal–emotional needs to addressing emerging or clearly existing concerns (Schwitzer, 2012). In turn, students, their institutions, and other constituencies often expect that the effects of counseling experiences will be reflected in better college adjustment and improved academic outcomes (Lee et al., 2009; Schwitzer, 2002).

Counseling Outcomes on Academic Performance: Mixed Research Results

In spite of this expectation, actual research findings have not provided definitive evidence for the effects of college counseling experiences on academic outcomes. The extant literature supports the negative impact of mental health concerns on college students' academic experiences (Lee et al., 2009; Sharkin, 2004) and the positive effects of counseling for addressing such psychosocial problems (Minami et al., 2009). However, previous findings regarding the connections between positive counseling outcomes on mental health and resulting positive changes in academic success so far have been less persuasive. For example, although Lee et al. (2009) reported that students receiving counseling had better academic performance and retention than did their peers without counseling, Choi et al. (2010) found no differences in six-year graduation rates. More recently, Bishop (2016) reported positive academic benefits of counseling but suggested they may partially depend on students' risk levels, with lower risk counseling clients experiencing better retention than higher risk clients. Likewise, the relative efficacy of the specific counseling services provided on academic outcomes requires further investigation. For instance, although some studies have suggested that more contact with the counseling center leads to better retention (Schwitzer, Grogan, Kaddoura, & Ochoa, 1993), others have reported that only briefer contacts may be needed (Draper, Jennings, Baron, Erdur, & Shankar, 2002).

Many previous studies also were limited to narrowly defined populations. For example, Lee et al. (2009) examined academic outcomes exclusively with first-year students; and Bishop (2016) reported findings for students who were considered at high risk for failure due to backgrounds comprising low high school GPAs, low family incomes, and being a first-generation college student. Other researchers, especially in studies that were conducted early on, focused narrowly on academically at-risk students receiving academic counseling services (Boyd, Magoon, & Leonard, 1982; Giddan et al., 1987; Schwitzer & Thomas, 1998). These counseling services are directed specifically at improving academic success, whereas general counseling addresses emotional and social issues that, in turn, can negatively influence academics. Such services appeared effective (Schwitzer et al., 1993), but outcomes from academic counseling for identified academically at-risk students cannot be generalized in a way that sufficiently informs questions about academics and personal–emotional counseling with a general student client population.

This Study

To fill this gap, we examined participation in college counseling and academic outcomes with a general counseling center population and we included several counseling treatment variables. In designing our study, we took into account what we viewed as the most important questions emerging from the mixture of extant research. Correspondingly, we asked four research questions about participation in counseling and academic outcomes: To what extent is there a relationship between (a) the number of counseling sessions and academic performance as measured by GPA and graduate rate? (b) the number of different returns for counseling and academic performance as measured by GPA and graduate rate?

(c) treatment completion and academic performance as measured by GPA and graduate rate? (d) improvement in global functioning and academic performance as measured by GPA and graduate rate?

We hypothesized that a greater number of sessions would be associated with positive academic change. We were interested in investigating this factor with a general campus population because, although Schwitzer et al. (1993) found that, for academically at-risk students, completing more sessions was associated with better academic outcomes, the research with general counseling clients has produced some findings supporting the use of brief counseling (between one and 10 sessions), whereas other research has supported the need for a moderate number of sessions (around 15) or even longer counseling (about 20 sessions) to produce clinically significant change in student distress and functioning (Draper et al., 2002; Wolgast, Lambert, & Puschner, 2003). Others reported no relationship between the number of counseling sessions and academic outcomes (Bishop, 2016; Lee et al., 2009).

Next, we hypothesized that more returns for counseling at different points in one's college career would be associated with positive academic change. We examined returns for counseling because, in their earlier work with academic at-risk clients, Schwitzer et al. (1993) found that, for these students, the incidence of returning for counseling when needed at various points in their college experience was associated with better graduation rates—and there continues to be interest in the role of learners' abilities to accurately seek counseling help when needed (Vogel, Wester, & Larson, 2007). We viewed this as a potentially important variable, because, as Salzer (2011) discussed, students' abilities to seek counseling when they are struggling with a mental health issue may be a critical factor in preventing academic difficulty and dropout.

We also hypothesized that completing counseling as recommended, compared with prematurely leaving counseling or being referred outside the counseling center, would be associated with better academic success. Whereas number of sessions and incidence of returns reflect the extent and timeliness of counseling services, treatment completion reflects whether a student-client persevered with counseling to the conclusion of a recommended treatment plan. The strategy of designing an appropriate counseling plan and engaging a student to complete the plan is a critical aspect of the therapeutic process (Schwitzer & Rubin, 2015). Because college clients generally do not have a sense of the number of sessions their treatment may require, one goal of effective counseling is to design an appropriate plan for treatment (Owen, Smith, & Rodolfa, 2009; Sharkin, 2012). This variable is of interest regarding college counseling efficacy but has yet to be fully examined in the context of academic outcomes (Ghetie, 2007).

Finally, we examined improvement in global functioning following counseling and, in turn, positive academic change to test the extent to which greater improvement in overall functioning over the course of counseling was logically associated with greater academic change. We hypothesized that improvement in functioning following counseling would be associated with academic improvement. Building on previous research that showed that students reporting clinically significant improvement after counseling also reported better resolution of academic problems (Choi et al., 2010), we designed our study to empirically measure these outcomes.

METHOD

We conducted a retrospective archival study of student data for students utilizing the

counseling center at a large metropolitan university during the years 2000–2008. We obtained client data from actual counseling records and academic data from institutional sources. We utilized older client records from 2000–2008 because all of these data were fully available to us and we were able to form an intact dataset from them. We utilized data from the widest range of years for which we could access the records to create the largest dataset available to us. This design allowed us to investigate data from actual counseling center client records rather than student self-reports. A natural limitation was that the data were historic and any newer trends in very recent client records were not investigated in this study.

Participants

A total of 1,141 undergraduates visited the university counseling center for at least one individual session within the study's timeframe. Graduate students who attended counseling within the timeframe were not examined due to our focus on undergraduate experiences. Among the 1,141 undergraduate students who visited the counseling center, those who attended counseling in their very first semester of enrollment at the institution (either as first-year students or transfers) were excluded from our sample because they would not yet have had a GPA on record at the university; having a GPA on record at the university prior to entering counseling was a prerequisite for being included in this study because in our analyses we controlled for precounseling GPA.

Participants endorsed self-selected demographic descriptions on a counseling center intake form. Among the participants, 69.0% self-reported as female ($n = 601$) and 31.0% as male ($n = 270$). The intake form provided binary gender options, so transgender options did not appear on the form. According to

the self-reported data, representation by race was as follows: 57.8% White ($n = 503$), 28.6% African American ($n = 249$), 4.6% Latina/o ($n = 40$), 4.5% Asian American ($n = 39$), and 1.4% international ($n = 12$). Additionally, 2.1% self-described as multiracial ($n = 18$) and 1.0% self-described as other race ($n = 9$). Regarding year in college, our sample comprised 17.1% freshmen ($n = 147$; 0–26 credits completed), 29.0% sophomores ($n = 249$; 27–58 credits), 28.5% juniors ($n = 245$; 59–90 credits), and 25.4% seniors ($n = 218$; 91–120 credits). Age data were unavailable.

Because this study relied on data from a single institution, we were concerned about demographic representativeness of the sample. Using binary gender constructs, the proportion of females and males in the research sample was comparable to national counseling center utilization trends. For instance, in a recent national survey of 380 counseling center directors, who provided percentages but not counts, counseling directors indicated that 65.3% of student-clients were female and 30.4% were male (Reetz, Barr, & Krylowicz, 2013). In comparison with the national data, our sample reflected a greater proportion of African American students and a somewhat smaller proportion of White students. Nationally, relying again on a recent survey of counseling center directors who reported percentages but not counts, on average 10.3% of students served by counseling centers were African American and 66.7% were White. Our research sample closely reflected the racial demographic composition of the campus on which the study took place. According to the campus assessment office data, 22.0% of the student population self-identified as African American ($n = 1,925$) and 59.0% as White ($n = 5,165$).

Intervention and Procedures

Students seeking counseling center services completed written assessment materials and participated in an initial appointment (intake meeting) at the counseling center. Intake meetings at the center utilized a uniform format that all of the center's counselors were expected to follow. Following this format, the dual purposes of the intake session were to provide initial counseling and to evaluate the need for additional services beyond the intake meeting. In the session, a counselor trained in the center's intake procedure provided initial therapeutic support and intervention based on the student's needs. When following the procedure, each counselor also obtained a brief history and explored the student's expectations and the potential role of counseling in improving college adjustment, development, or learning.

As part of the initial assessment, the staff member, in collaboration with the student, determined what type of services beyond the initial intake meeting, if any, would best help resolve the student's concerns. Either further individual counseling sessions were indicated (the center did not utilize group or couples counseling during the timeframe of the study) or the student was referred to another campus office. When additional individual counseling was indicated, students were either encouraged to continue their contact with the counseling center through ongoing individual counseling sessions with the same counselor who was conducting the initial interview, or in some cases, were encouraged to follow through with an off-campus referral for more extensive services when warranted. Students for whom further counseling was indicated were included in the current study. The counselor estimated the most appropriate diagnosis and treatment plan based on the student's presenting concerns. Records from

the initial counseling appointment (intake meeting), subsequent ongoing counseling center session records, and final assessment materials were kept and then utilized in the current study.

Independent Variables

Number of counseling sessions was a straightforward count of the total number of counseling sessions attended. Extent of services operationalized by the number of sessions has been well established as an important variable when examining college counseling outcomes (Ghetie, 2007; Schwitzer et al., 1993). The first counseling session was the intake appointment. One decision to be made when conducting counseling center research is whether to include the initial meeting in the session count. The total number of contacts traditionally has been used in counseling center research when session counts are required (Bishop, 2016; Lee et al., 2009; Schwitzer et al., 1993). We counted all contacts beginning with the initial meeting. The counseling center that was the focus of this study used a standardized intake similar to the one examined by Lee et al. (2009), who noted that the intake interview is conducted "to obtain information about . . . the presenting problem [and] relevant background information. [It] also serves as an opportunity to provide brief therapeutic interventions. . . . Therefore, students often receive psychological assistance . . . even in the intake session" (p. 307). In fact, brief therapy in the college counseling context previously has been operationalized by student access to as few as 1 to 5 sessions (Coll, Nicholson, & Wilson, 2003; Sharkin, 2012).

Return for counseling was defined as visiting the counseling center for more than one series of individual counseling sessions at different points in time during a person's college experience. A new course of counseling was operationalized based on client records

indicating a new round of counseling initiated 2 months or more after the termination date of a previous course of treatment. Schwitzer et al. (1993) first introduced new returns for counseling as a relevant variable when evaluating counseling effects on academic outcomes: “Whereas total sessions represented overall extent of counseling [contacts], the [return for additional counseling] variable [assesses] the student’s incidence of . . . self-initiated help-seeking in response to [a newly emerging] perceived need” (p. 403). Assisting individuals to overcome the factors that often inhibit college students from timely help-seeking in the future may be an important benefit of visiting the counseling center (Vogel et al., 2007). In our study, return for counseling was operationalized as a dichotomous variable indicating either a single course of counseling or two or more courses of counseling over the student’s college experience. For each new return, new data pertaining to the Global Assessment of Functioning (GAF; APA, 2000) at intake and termination as well as academic data were collected.

Treatment completion described whether or not the student completed the entire recommended course of counseling according to counselor records. Treatment completion is another well-established variable relevant to college counseling outcomes (Hatchett, 2004; Wolgast et al., 2003). Correspondingly, completion is seen as an important variable because client dropout from counseling prior to completion of a recommended treatment plan is one potentially problematic obstacle to experiencing the beneficial outcomes of counseling in the college setting (Lampropoulos, Schneider, & Spengler, 2009). We were interested in whether dropping out of counseling early versus persevering through the conclusion of treatment would relate to academic outcomes. Students in our study fell into one of three categories: referred

students, counseling center clients completing treatment, and counseling center clients not completing a recommended treatment plan. Students in the referred category were those who were referred to another service outside the counseling center. Treatment completion at the counseling center was described in the records by a termination summary indicating the student and counselor collaborated to end services. Counselors designed a treatment plan that “base[d] the number of sessions on the individual student’s level of symptom distress when first entering counseling” (Sharkin, 2012, p. 96). Counseling records reported whether the initial session number was followed to the predetermined termination session, the initial session number was modified and then followed to a termination session identified by the counselor and client, or the student stopped services prematurely based on the counseling treatment plan.

The GAF (APA, 2000) is a psychometric measure used by counseling professionals to globally rate a client’s psychological, social, and occupational or academic functioning on a scale ranging from 0 to 100, with higher numbers representing better overall functioning of the client. For example, students with GAF scores of 91–100 are considered to experience “superior functioning” without any mental health symptoms; those with scores of 81–90 are considered to experience “good functioning” and “absent or minimal symptoms (e.g., mild anxiety before an exam)”; those with scores of 61–70 have “some mild symptoms (e.g., depressed mood and mild insomnia) or some difficulty in social, occupational, or school functioning” (APA, 2000, p. 34). The GAF was arguably the most widely utilized counseling assessment scale during the time frame of the study because it was a required element of any professional psychological diagnosis from 1980–2013. The GAF scale has been demonstrated to maintain

good concurrent validity and interrater reliability: Bacon, Collins, and Plake (2002) found kappa statistics of .65, .70, and .69, concluded that there was good interrater reliability, and reported that counselors successfully considered the individual's presenting symptoms and adjustment factors. In our study, counseling center staff completed a GAF score at the point of the initial student meeting (intake) and again at the end of counseling (termination). We used the final GAF score at termination as an independent variable and used the initial GAF at intake as a control variable to account for the expected increase in GAF scores from the counseling experience.

Dependent Variables

Dependent variables in this study were cumulative grade point average (GPA) and degree completion. GPAs used in the study were participants' postcounseling cumulative GPA (at the end of the final semester in which counseling services were utilized), with precounseling cumulative GPA (from the semester immediately prior to counseling) used as a control variable. Degree completion was operationalized as whether or not a participant obtained a bachelor's degree within 6 years of enrolling of enrollment. The threshold of 6 years was used because it is the marker used by the university's institutional research office to calculate graduation rates. GPAs and degree completion were obtained from institutional records. Obtaining the data from university records was an advantage over some previous studies that relied on student self-reports.

Covariate

We included the additional binary variable, gender, as a covariate because we were investigating academic outcomes and recent trends in higher education suggest a gender difference in enrollment, retention, and degree attainment (Buchmann, DiPrete, & McDaniel, 2008).

According to 2012 national data, among recent cohorts of first-time, full-time college students, 61% of females across racial backgrounds earned a degree within 6 years compared to 56% of males (National Center for Education Statistics, 2014). Therefore, we believed it was prudent to control for gender when examining academic outcomes.

Analyses

We conducted multiple regression analyses to answer the research questions pertaining to GPA because multiple regression allows two or more variables to be tested as predictors of a continuous variable. Specifically, hierarchical multiple regression allowed us to control for variables by using multiple steps in the analysis. It allowed us to build separate but related models so that at step 1 we could enter the independent variable to test it as a predictor of the dependent variable and then in step 2 we could enter the control variables (gender, GAF at intake, and precounseling cumulative GPA) to see if the independent variable predicted the dependent variable beyond the effect of the control variables. We used hierarchical logistic regression to compare models with the dependent variable, degree completion, because logistic regression was tailored to dichotomous, categorical variables such as degree completion. Hierarchical logistic regression allowed us to compare two models: the first model examined whether the independent variable predicted the dependent variable, degree completion, whereas the second model examined whether the independent variable predicted degree completion after controlling for gender, GAF at intake, and precounseling cumulative GPA. We performed a one-way analysis of covariance to examine whether type of treatment completion (complete, incomplete, referral) was associated with participants' cumulative GPA after receiving counseling

TABLE 1.
Descriptive Statistics for Categorical and Continuous
Independent and Dependent Variables ($N = 871$)

Variable	n	%	Skewness γ_1	Kurtosis γ_2
<i>Categorical Variables</i>				
One Course of Counseling	570	65.60		
Two or More Courses of Counseling (Return for Counseling)	299	34.40		
Treatment Complete	271	25.80		
Treatment Incomplete	401	47.70		
Referral	223	26.50		
Degree Completed Within 6 Years	487	55.90		
Degree Not Completed Within 6 Years	384	44.10		
<i>Continuous Variables (means)</i>				
Counseling Sessions	3.53	3.26	1.46	1.36
GAF at Intake	65.35	5.93	-0.21	0.92
GAF at Termination	67.48	7.09	0.06	0.69
Precounseling Cumulative GPA	2.58	0.93	-1.15	1.32
Postcounseling Cumulative GPA	2.55	0.89	-1.13	1.33

Notes. Percentages do not equal 100% for every variable due to rounding. GAF = Global Assessment of Functioning (APA, 2000); GPA = Grade point average obtained from institutional records.

while controlling for gender, GAF at intake, and precounseling cumulative GPA.

RESULTS

Preliminary Analyses and Assumptions

Frequency data for categorical variables and descriptive statistics for continuous variables examined in this study are presented in Table 1. Exploratory correlation analyses were conducted to examine multicollinearity. As seen in Table 2, the independent variables were not overly highly correlated, suggesting an absence of multicollinearity. We performed an additional dependent t test to confirm that these were unique variables. Based on the t test we concluded that the two measures were unique

variables, $t(815) = -13.63$, $p < .001$, 95% CI $[-2.47, -1.85]$, with GAF scores at termination ($M = 67.44$, $SD = 7.12$) being significantly higher than GAF scores at intake ($M = 65.28$, $SD = 5.94$). Next we used descriptive statistics to check for normality of the distribution of data for the continuous variables; skewness and kurtosis statistics equaling the absolute value of two or greater were considered to violate the assumption of normal distribution. None of the continuous variables were above the threshold. For the multiple regression analyses, we examined the residual statistics to check for assumptions of linearity and homoscedasticity using scatterplots of residuals against predicted values of the dependent variable. We concluded there was a linear relationship and homoscedasticity between

the independent and dependent variables. We also tested the assumption of independence of errors using a Durbin–Watson statistic of greater than 2 as the threshold for the analyses. The Durbin–Watson statistics were at 2.00, falling below our threshold for Type I error.

Counseling Sessions and Academic Success

We performed a hierarchical multiple regression to examine whether the number of counseling sessions was associated with participants’ cumulative GPA after receiving counseling ($n = 832$). The independent variable, number of counseling sessions, was entered at step 1; the covariates gender, GAF at intake, and precounseling cumulative GPA were entered at step 2; the dependent variable was GPA after counseling. The overall hierarchical multiple regression for step 1 was significant, $F(1,831) = 6.00, p < .05, R^2 = .01, \text{adjusted } R^2 = .01$. The number of counseling sessions ($\beta = .09, p < .01$) was a significant positive predictor of cumulative GPA following counseling treatment. In addition, the regression for step 2 was significant, $F(4,828) = 1,326.86, p < .001, R^2 = .87, \text{adjusted } R^2 = .86$. In step 2, number

of counseling sessions ($\beta = .03, p < .05$) and precounseling cumulative GPA ($\beta = .92, p < .001$) were significant positive predictors of postcounseling cumulative GPA. Model 1 (R^2) accounted for 1.0% of the variance in GPA and model 2 (R^2) accounted for 86.4% of the variance in GPA. The more counseling sessions attended, the higher the cumulative GPA. The higher precounseling GPAs were, the higher participants’ postcounseling cumulative GPAs were. Gender ($\beta = -.03, p < .05$) was a significant negative predictor of postcounseling cumulative GPA, with males more likely to earn a lower cumulative GPA than females. GAF at intake ($\beta = .02$) was not a significant predictor in the model.

We performed a hierarchical logistic regression to assess if the number of counseling sessions was related to whether or not participants graduated within 6 years. The independent variable, counseling sessions, and dependent variable, degree completion, were entered at step 1. The covariates gender, GAF at intake, and precounseling cumulative GPA were entered at step 2. The overall hierarchical logistic regression for step 1 was significant, $\chi^2(1, n = 833) = 5.14, p < .05, R^2 = .01$. Model 1 explained 1.0% of the variance

TABLE 2.
Correlations Among Independent Variables

Independent Variable	1	2	3	4	5
1. Gender	—				
2. Return for Counseling	-.02	—			
3. Counseling Sessions	-.04	-.01	—		
4. GAF at Intake	.01	-.00	.10**	—	
5. GAF at Termination	-.00	-.04	.34**	.77**	—
6. Precounseling Cumulative GPA	-.20**	.04	.03	.08*	.10**

Note. GAF = Global assessment of functioning (APA, 2000); GPA = Grade point average obtained from institutional records.

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

(Nagelkerke R^2) and correctly classified 56.5% of the cases. Number of counseling sessions was a significant positive predictor of whether or not students completed a degree within 6 years. For every 1-unit increase in the number of counseling sessions, the odds of degree completion increased by 5.1%.

For step 2, the overall hierarchical logistic regression was significant, $\chi^2(3, n = 833) = 171.98, p < .001, R^2 = .26$. Nagelkerke R^2 indicated that model 2 accounted for 25.7% of the variance and correctly classified 70.6% of the cases. Gender, GAF at intake, and precounseling cumulative GPA were significant positive predictors of degree completion, whereas the number of counseling sessions was no longer a significant predictor. Being male decreased the odds of earning a degree by 57.0%. Participants were 4.5% more likely to earn a degree with a 1-unit increase in the GAF rating at the intake session. Participants were 188.0% more likely to earn a degree with a 1-unit increase in the precounseling cumulative GPA.

Return for Counseling and Academic Success

We performed a hierarchical multiple regression to assess whether returning for additional courses of counseling was associated with cumulative GPA ($n = 833$). The independent variable, courses of counseling (one course of counseling or two or more courses), and the dependent variable, cumulative GPA, were entered at step 1. The control variables gender, GAF at intake, and precounseling GPA were entered at step 2. The overall hierarchical multiple regression for step 1 was not significant, $F(1,832) = 3.04, ns, R^2 = .00$, adjusted $R^2 = .00$. Courses of counseling ($\beta = .06$) was not a significant predictor of cumulative GPA following counseling treatment. In addition, the regression for step 2 was significant, $F(4,829) = 1321.03, p < .001,$

$R^2 = .87$ adjusted $R^2 = .87$. In step 2, gender ($\beta = -.03, p < .05$) had a significant negative relationship with cumulative GPA, with males more likely to have earned a lower cumulative GPA than were females. Precounseling GPA ($\beta = .92, p < .001$) was a significant positive predictor of cumulative postcounseling GPA. Courses of counseling ($\beta = .02$) and GAF at intake ($\beta = .02$) were not significant predictors of postcounseling cumulative GPA.

We performed a hierarchical logistic regression to assess whether returning for additional courses of counseling was associated with participants graduating within 6 years. The independent variable, courses of counseling (one course of counseling or two or more courses), and the dependent variable, degree completion, were entered at step 1. The control variables gender, GAF at intake, and precounseling cumulative GPA were entered at step 2. The overall hierarchical logistic regression for step 1 was not significant, $\chi^2(1, n = 834) = 1.49, ns, R^2 = .00$. Counseling courses was not a significant predictor of whether or not students completed a degree within 6 years.

For step 2, the overall hierarchical logistic regression was significant, $\chi^2(3, n = 834) = 174.44, p < .001, R^2 = .26$. Model 2 predicted 25.5% of the variance (Nagelkerke R^2) and correctly classified 69.7% of cases. The number of courses of counseling was not a significant predictor of degree completion. Gender, GAF at intake, and precounseling cumulative GPA were significant positive predictors of degree completion. For gender, being a male significantly decreased the odds of earning a degree by 56.2% in comparison to being female. Participants were 4.8% more likely to have completed a degree with every 1-unit increase in the GAF rating at the intake counseling session. Participants were 187.0% more likely to have completed a degree with every 1-unit increase in the precounseling cumulative GPA.

Treatment Completion and Academic Success

We performed a one-way analysis of covariance to examine whether type of treatment completion (complete, incomplete, referral) was associated with participants' cumulative GPA after receiving counseling while controlling for gender, GAF at intake, and precounseling cumulative GPA ($n = 815$). The analysis revealed a significant difference in cumulative GPA among the three groups of treatment completion type after controlling for gender, GAF at intake, and precounseling cumulative GPA, $F(2, 809) = 4.55, p < .05, \eta^2 = .01$. Results showed significant pairwise differences between the mean scores of cumulative GPA among those who completed treatment ($M = 2.60, SD = .02, n = 206$) versus those who did not complete treatment ($M = 2.52, SD = .02, n = 393$) at the termination of counseling. Students who completed treatment had significantly higher cumulative GPAs than did those who did not complete treatment ($p < .05$). Those who were referred to other services ($M = 2.58, SD = .02, n = 216$) did not significantly differ in cumulative GPA from students who were not referred. Precounseling cumulative GPA was a significant covariate, $F(1, 809) = 4859.04, p < .001, \eta^2 = .85$. Gender was not a significant covariate, $F(1, 809) = 3.86, p = .05$. GAF at intake was not a significant covariate, $F(1, 809) = 3.46, p = .06$.

We performed a hierarchical logistic regression to assess whether type of treatment completion was associated with participants' graduating within 6 years. The independent variable, type of treatment completion (complete, incomplete, referral), and the dependent variable, degree completion, were entered at step 1. The covariates gender, GAF at intake, and precounseling cumulative GPA were entered at step 2. The overall hierarchical

logistic regression for step 1 was significant, $\chi^2(2, n = 815) = 11.09, p < .01, R^2 = .02$. Model one explained 1.8% of the variance (Nagelkerke R^2) and correctly classified 56.8% of the cases. Incomplete treatment and referral treatment were significant negative predictors of whether or not students completed a degree within six years. Not completing treatment decreased the odds of earning a degree by 64.1% in comparison to completing treatment. Counseling treatment referral decreased the odds of earning a degree by 52.4% in comparison to completing treatment.

For step 2, the overall hierarchical logistic regression was significant, $\chi^2(3, n = 815) = 160.25, p < .001, R^2 = .25$. Nagelkerke R^2 indicated that model two accounted for 25.4% of the variance and correctly classified 70.3% of the cases. Gender, GAF at intake, and precounseling cumulative GPA were significant positive predictors of degree completion, whereas treatment type was no longer a significant predictor. Being male decreased the odds of earning a degree by 56.9%. Participants were 3.9% more likely to earn a degree with a 1-unit increase in the GAF rating at the intake session. Participants were 181.0% more likely to earn a degree with a 1-unit increase in the precounseling cumulative GPA.

GAF Scores at Termination and Academic Success

We conducted a hierarchical multiple regression to examine whether the GAF score at termination of counseling was associated with cumulative GPA following participation in counseling ($n = 814$). The independent variable, GAF at termination, was entered at step 1; the covariates gender, GAF at intake, and precounseling cumulative GPA were entered at step 2 as control variables; the dependent variable was postcounseling cumulative GPA. The overall hierarchical multiple regression

for step 1 was significant, $F(1,813) = 13.74$, $p < .001$, $R^2 = .02$, adjusted $R^2 = .02$. The GAF score at the termination of counseling ($\beta = .13$, $p < .001$) was a significant positive predictor of cumulative GPA following counseling treatment. In addition, the regression for step 2 was significant, $F(4,810) = 1,289.41$, $p < .001$, $R^2 = .86$, adjusted $R^2 = .86$. In step 2, being male ($\beta = -.03$, $p < .05$) was a significant negative predictor of postcounseling cumulative GPA. Males were more likely to earn a lower cumulative GPA than were females. Precounseling GPA ($\beta = .92$, $p < .001$) was a significant positive predictor of postcounseling cumulative GPA. In step 2, GAF score at counseling termination ($\beta = .03$) and GAF at intake ($\beta = .00$) were not significant predictors of GPA.

We conducted a final hierarchical logistic regression to evaluate whether GAF score at termination was associated with participants' graduating within 6 years. The independent variable, GAF at termination, and the dependent variable, degree completion, were entered at step 1. The covariates gender, GAF at intake, and precounseling cumulative GPA were entered at step 2. The overall hierarchical logistic regression for step 1 was significant, $\chi^2(1, n = 815) = 10.97$, $p < .01$, $R^2 = .02$. Model 1 accounted for 2.0% of the variance (Nagelkerke R^2) and correctly classified 57.4% of cases. The GAF score at termination of counseling was a significant positive predictor of degree completion. With every 1-unit increase in the GAF score at counseling termination, the odds of completing a degree increased by 3.4%.

For step 2, the overall hierarchical logistic regression was significant, $\chi^2(3, n = 815) = 159.09$, $p < .001$, $R^2 = .25$. Model 2 accounted for 25.3% of the variance (Nagelkerke R^2) and correctly classified 69.4% of cases. Gender, GAF score at intake, and precounseling cumulative GPA were significant positive predictors of degree completion, whereas GAF at termination

was no longer a significant predictor. For gender, being a male significantly decreased the odds of earning a degree by 58.0%. Participants were 6.4% more likely to have completed a degree with every 1-unit increase in the GAF rating at the intake counseling session. Participants were 185.0% more likely to have completed a degree with every 1-unit increase in the precounseling cumulative GPA.

DISCUSSION

We examined college counseling and academic outcomes and found evidence that participating in counseling was beneficial to academic success. Although modest sizes of the effects were uncovered, our study suggests that students who visited the center and then remained in counseling until the client and counselor agreed to terminate treatment were likely to experience more successful GPAs than were their client peers who declined to complete the recommended course of counseling after their first meeting with a counselor. Further, attending more sessions appeared increasingly beneficial to students' GPAs. Looking at our effect sizes, slight increases in GPA were accounted for by attending counseling to completion, with increases in sessions associated with further small increases in academic success. Turning to graduation within 6 years, although both treatment completion and number of counseling sessions also initially appeared to be positively associated with graduation, these influences became insignificant once precounseling cumulative GPA and precounseling level of functioning (GAF at intake) were entered into our models. Similarly, although being referred to off-campus services initially appeared to be negatively associated with graduation, this negative influence also became insignificant once precounseling GPA and precounseling level of functioning were entered into our models. In contrast with number of sessions

and treatment completion, we did not find returns for counseling (during a person's college career) to result in better GPAs or higher rates of graduation within 6 years; whereas number of sessions and completion of counseling appeared important to academic outcomes, returns for counseling at different points in time was not. Contrary to our predictions, a student's level of functioning following counseling was not predictive of a better GPA or graduation within 6 years. Overall, we did find consistently throughout our analyses that precounseling level of functioning and precounseling cumulative GPA were strong, important predictors of later academic success.

Our results add to the findings of other researchers suggesting that college counseling may have positive outcomes on academic success. Some of this recent research was based on student self-reports. For example, Alschuler et al. (2009) presented students' reports that mental health needs, such as depression and anxiety, were causing academic difficulties, whereas Lee et al. (2009) presented student reports indicating they experienced improvements not only in overall wellness but also in academic performance after participating in counseling. Other previous research focused on narrow campus populations such as academically at-risk financial aid students or first-year African American students. By comparison, this study provides new support for the potential academic benefits of counseling based on empirical evidence from client records with a broad student population.

Our results also add to the recent literature about extent of services, completing treatment, and referral. Previous researchers have had mixed results about whether greater counseling contacts were associated with greater clinical improvement and, in turn, academic success (Draper et al., 2002; Wolgast et al., 2003). Perseverance in counseling to

the conclusion of a recommended treatment plan has been discussed in the literature as an important variable with the potential to influence counseling effectiveness (Ghetie, 2007; Sharkin, 2004). Some researchers have specifically identified premature termination as an obstacle to college psychotherapy outcomes (Hatchett, 2004; Lampropoulos et al., 2009). Others have identified student perseverance with off-campus referrals as another obstacle to successful counseling outcomes (Owen, Devdas, & Rodolfa, 2007). Addressing these issues, our results offer new empirical support, with modest effect sizes, for the suggestion that there may be a positive relationship between greater session contacts and greater improvements in GPA as well as between treatment completion and GPA. Further, although earlier research seemed to show that timeliness of return for counseling or peer counseling was related to better academic success, we did not find later returns for additional counseling to be a potentially important factor in the way that number of sessions and treatment completion were.

Interestingly, although attending more counseling sessions and completing counseling produced small but noticeable improvements in GPA, these effects were not seen for graduation when precounseling GPA and precounseling level of function were considered. Although the results of this study support the beneficial effects of counseling on GPA, the relationship between these two factors and ultimately graduating within 6 years is less clear. Bishop (2016) recently suggested that, although counseling appears beneficial for students generally, it may not improve dropout rates among psychologically high-risk clients in the same way it does for lower-risk students. Our mixed results may be consistent with Bishop's findings—suggesting that, for some students, counseling may support academic performance in the short term, as seen in GPA, but may be

insufficient for buttressing academic success over the long haul of their college career to ultimate graduation.

Our results concerning students' level of function following counseling when taking into account their level of functioning at the beginning of counseling and our finding regarding off-campus referral were both more surprising. Although we expected postcounseling functioning to be associated with better academic outcomes and for off-campus referral to be associated with less academic benefit, neither of these variables was important once the factors of precounseling GPA and precounseling level of functioning were considered. Here again, as Bishop (2016) recently suggested, it may be that a student's psychological high-risk status at the onset of counseling, as evidenced by measured level of function and by academic performance (GPA), may have a delimiting influence on counseling academic outcomes.

Limitations

These findings should be understood in the context of the study's limitations. First, because this was a study of time-lagged archival data based on one counseling center's unique recordkeeping at a single institution, generalizability should not be assumed. Next, the study's validity is limited by several design decisions we made. First, we counted the first meeting together with subsequent counseling sessions; alternatively, it is possible to view the first intake session as a unique treatment variable. Next, we counted counseling treatment plans as successful when counselors' notes indicated the client completed an agreed-upon plan for sessions and length of treatment; other explanations for mutually agreed-upon termination are possible. We counted off-campus referrals equally regardless of when they occurred during the counseling experience or why; the success of off-campus referrals possibly varies depending on when

referral occurs during the counseling center encounter and the reasons for off-campus referral. We used the GAF as a measure of global functioning because it was by far the most widely used psychometric measure of functioning at the time and there is support in the literature for its use; however, researchers have raised questions about its reliability and validity when viewed across counselors or when used by a counselor across different clients (Aas, 2010; APA, 2013). Further, counseling centers currently use a revised diagnostic system that does not require the GAF (APA, 2013). We used change in GPA as one academic outcome measure; in turn, we excluded from the study those clients without institutional GPAs (i.e., first-semester matriculants and first-semester transfers). Finally, we did not have access to data pertaining to individual counselors; therefore, we were not able to report therapist-level data, compare effectiveness among counselors, or account for client nesting within counselor pairings.

Implications for Practice

Our results have implications for higher education professionals generally, academic support staff, and counseling center staff. First, it seems clearer from our findings about counseling outcomes on GPA that when campus professionals in various roles believe a student might be experiencing academic roadblocks stemming from disruptive or distressing problems falling within the mental health domain, they should actively pursue referrals to the counseling center. More specifically, because our overall findings, like those of Bishop (2016), suggest the negative academic implications for psychologically high-risk students and students with the already entrenched GPAs over the long haul to college graduation, such students should be targeted. For institutions, this may mean increasing efforts to encourage students with psychologically high-risk backgrounds or

academically high-risk track records to disclose their needs early on in their institutional life to disability services, the campus ombudsperson office, or similar services. It also might mean offering more opportunities for early assessment and evaluation at first-year programming, orientations, and advising fairs. It seems clear that earlier identification and more extensive early efforts to connect students with supports is needed to address the barrier of well-established academic problems that can develop over time from college student mental health needs.

For individual professionals, this requires being on the lookout for such students, approaching and engaging the person, providing feedback about what behaviors brought to mind the possibility of mental health concerns interfering with academic success, testing the student's response, and attempting to make a counseling center referral. When making referrals, higher education professionals should be aware that students often avoid following through on such referrals due to the negative, undermining social norms about seeking mental health services that can exist in campus cultures and beliefs that help-seeking suggests personal inadequacy (Vogel et al. 2007). In turn, it may be necessary to provide extra encouragement and active support to ensure a successful referral. This can be accomplished by being a knowledgeable resource about counseling, making an advance call to the center on the student's behalf, walking with the student to counseling, or motivating the student by discussing the potential benefits not only to psychological functioning but also to academic performance. Thinking ahead of time about what to say and where to refer when confronting such a student situation will be useful. To confront negative social norms about help-seeking, student affairs professionals in campus life roles should continue to offer counseling center presentations and faculty should invite

classroom presentations. The goals should be earlier identification and referral as well as communicating that counseling services may produce positive effects on GPA.

Next, academic advisors, academic success staff, and University 101 instructors should emphasize the role of the counseling center in promoting academic outcomes. In their work with individuals who are academically at-risk, academic support staff should be intentional in considering whether a counseling center referral is indicated. In one early study, Cowan and Morewitz (1995) found that when health center staff actively included questions about student psychosocial needs during appointments, they were significantly more likely to uncover mental health problems they had not previously noticed. Our results support similar efforts by academic support professionals. Here again, our study and that of Bishop (2016) suggest that the goals should be earlier identification and referral and communicating that counseling services may produce positive effects on GPA.

For counseling center staff, it also seems clearer from our study that students who remain in counseling to its planned conclusion may experience the greatest academic benefits. This is an important dynamic because previous researchers have documented that college students often terminate counseling early (Hatchett, 2004; Wolgast et al., 2003). Some students might leave counseling because they continue to endorse negative social norms about counseling they encounter (Vogel et al., 2007). Others may continue to associate utilizing counseling services with personal inadequacy; in fact, given that late adolescence is associated with the developmental task of increasing autonomy, some students may experience the help-seeking role as a developmental barrier (Wilson & Deane, 2012). Correspondingly, counseling staff should utilize strategies that encourage students to return to and

remain in counseling. Historically, there is an accumulation of evidence about such strategies from the counselor engagement literature. As Tryon (1989, 1990, 2003) has shown, counseling center intake staff can improve client returns for postintake therapy by focusing on clarifying the student's understanding of presenting problems through the increased use of questions, by providing more specific information about the subsequent course of counseling, and by offering some strategies or other direct work on the student's presenting problem at the outset. More recently, evidence has begun to accumulate about the beneficial outcomes of motivational interviewing and other positive psychology techniques on college student persistence in counseling (Scholl, McGowan, & Hansen, 2012; Wade, Marks, & Hetzel, 2015). Given the potential importance of counseling completion, we suggest integrating motivational interview techniques and positive psychology strategies into counselors' existing practices with the goal of strengthening client persistence through termination. Our study also suggests that more sessions may be associated with greater academic outcomes. This is consistent with other studies suggesting that about half of students may require around 15 sessions and a few will need more than 20 to experience improvement (Wolgast et al., 2003). This is an important consideration, because nearly half of counseling centers employ session limits or brief approaches (Gallagher, 2013). Taken together, there are implications for student affairs leaders who set counseling center policy. Centers might best serve students by adopting policies that match sessions with individual client needs and de-emphasizing off-campus referrals.

Future Research

Our findings suggest at least two important lines for future research. First, we lacked the archival information to examine counselor-

level data; in turn, we were unable to address the potential for clients being nested within therapist conditions (Wampold & Serlin, 2000). In fact, based on our own review of the literature, we found this to be a pervasive limitation of existing studies in the college health and mental health literatures. Perhaps the most compelling need for future research is for studies that follow and report on clients as well as individual counselors to begin separating out the interdependence that might occur between main treatment effects of college counseling on academic success versus data that are associated with counselor conditions. We suggest that future studies account for therapist nesting from the start with researchers using multilevel statistical procedures with counselors treated as a random variable.

Second, our findings that functioning after counseling and returns for future counseling are related to better GPAs but not graduation within 6 years require further investigation. Bishop (2016) similarly concluded that risk for dropout may be a more entrenched problem for psychologically higher-risk students. Studies are needed that intentionally identify clients by risk levels and then follow students throughout their college career. Schwitzer (2005) summarized an established investigative framework based on psychodevelopmental risk that could be utilized with counseling center academic outcomes. In addition, it was beyond our study's limits to examine gender from a nonbinary perspective, individual differences according to race, and other demographics. In addition to these lines of study, follow-up research that combines contemporary counseling records from multiple institutions using uniform client data to confirm or modify our results is needed to expand generalizability. It also was beyond our scope to evaluate the institutional impact of counseling center outcomes outside of academic success.

Our study contributes to the ongoing investigation of college counseling outcomes on academic success. Our findings add empirical evidence from actual client records to an extant literature that has focused primarily on student self-reports and counseling staff perceptions. Although our work shows the promise that college counseling may have for improving students' academic as well as

emotional lives, our findings were narrow and modest, and we hope new studies will add further support for the role of counseling in the college experience.

Correspondence concerning this article should be addressed to Alan M. Schwitzer Department of Counseling & Human Services, Darden College of Education; aschwitz@odu.edu

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