

Mandatory Counseling and Students' Academic Success

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This study examined the relationship between mandatory counseling and student academic success measures for students who violated campus alcohol policy. The results were analyzed from the vantage of objective measures of academic success (GPA and retention). Findings indicated that college students who attended mandated counseling imposed through a discipline process were more likely to be retained in the Fall term of the subsequent year and to achieve higher average cumulative grade point averages than referred students who did not attend counseling. Implications for judicial officers, alcohol educators, and counselors are outlined.

Student alcohol abuse plagues college campuses throughout the country and has been linked to a wide-scope of corresponding negative consequences including academic decline, serious injury, and even death (NIAAA, 2002a). When students decrease the amount of alcohol consumed, the likelihood of the ensuing dangerous behaviors intoxicated students tend to exhibit also decreases (Whitlock et al., 2004). Colleges have spent vast resources on myriad interventions designed to educate students on the consequences of drinking and, ultimately, to reduce students' alcohol consumption. Yet, students generally do not recognize their drinking problems (Knight et al., 2002) or to self-present to the counseling center for treatment for such issues (Ross, 2004). Consequently, campuses depend upon outreach and educational programming to connect with students (Bolton-Brownlee, 1987) even though this approach has proved highly ineffective (NACAAA, 2002b; Larimer & Cronce, 2002).

A more probable method of reaching students in need of intervention may exist through targeting at-risk subpopulations (O'Hare, 1997). Judicial officers have contact with significant numbers of students who are facing discipline infractions associated with the use of alcohol. These students, who tend to be heavier consumers of alcohol than students not referred to the discipline system, are at greater risk for experiencing the negative consequences related to their drinking (Barnett et al., 2004; O'Hare, 1998). A variety of developmental and educational consequences designed to change students' drinking patterns are often imposed as disciplinary sanctions. However, campus discipline systems are rarely assessed or empirically studied (Fitch & Murry, 2001; Hirschfeld, Edwardson, McGovern, 2005) and discipline interventions, specifically, have been identified as a "key research gap" by the National Advisory Council on Alcohol

Abuse and Alcoholism Task Force on College Drinking. Despite this lack of empirical knowledge, judicial officers continue such sanctioning practices as they seek to help students change high-risk drinking behaviors and succeed personally and academically.

Mandatory Counseling

While counseling, in particular brief intervention treatment, can be highly successful when voluntarily sought (NIAAA, 2002b, p.4 & p. 13), to date only one article has reported on the impact of a mandated brief intervention program (Larimar, Cronce, Lee, & Kilmer, 2004/2005). In that study, researchers evaluated adjudicated students sanctioned to brief intervention counseling and found these reductions in drinking levels equal to students who voluntarily, self-initiated such counseling (Barnett et al., 2004). The analysis was based solely on the students' self-reported drinking behavior, though, and, as self-reports are subjective by their very nature, was limited in this regard. Nonetheless, the impracticality of monitoring student behavior around-the-clock makes this method appealing even though objective measures of evaluation would further establish the credibility of the intervention.

It is unclear how many campuses make use of mandatory counseling when adjudicating alcohol offenders as different studies have reported vastly different frequencies. Further complicating matters, not all studies on alcohol adjudication have clearly delineated between mandatory counseling and voluntary counseling. In fact, at least one study found that counselors and judicial officers may hold different beliefs as to whether the counseling students are receiving is voluntary or mandatory. Finally, studies have not always specified whether counseling was invoked after a single alcohol offense

or after multiple offenses (Hirshfeld et al., 2005; Consolvo & Dannells, 2000; Gallagher et al., 1997).

It is also largely unknown whether or not mandated counseling has an inverse relationship to the amount of alcohol students consume or the likelihood that they will experience any of the negative consequences linked to alcohol abuse. This includes whether or not mandatory counseling is related to improved academic achievement, an important question as many studies have suggested the opposite is true, that is, high-levels of drinking relates negatively to academic success (McAloon, 1994; Presley et al., 1993; NACAAA, 2002c). If this is so, a successful intervention may be expected to facilitate students' academic progress as long as one takes into account the effect of incoming background and achievement differences, e.g. demographic predispositions, incoming aptitude and high school achievement, factors which have been attributed to the variation in academic difficulties that have been exhibited by student drinkers (Wood, Sher, Erickson, & DeBord, 1997). The primary background variables, in general, that have been associated with academic success include: SAT composite scores, (Astin, 1997; Camara & Echternacht, 2000; Reason, 2003); high school graduation rank (DesJardins, Ahlburg, & McCall, 1998); family size (Bahr & Leigh, 1978; Stinebrickner & Stinebrickner, 2000) and whether the high school program was college-preparatory or vocational (Adelman, 1999).

Additionally, since selected in-school variables have also shown to have an impact upon academic success, an appropriate analysis should also account for such variables as the combined total of entering student deficiencies in math, English and reading (Adelman, 1999); amount of financial aid (DesJardins et al., 1998); working

while in school (McLaughlin, Perkhounkova, & Noble, 2006), and semester credits attempted (Mohammadi, 1996) all having an impact. Finally, previous academic success, as manifested by college GPA in prior semesters, has also been shown to affect retention (for example, see Pascarella & Terenzini, 1980, 1991; Cabrera, Nora, & Castamed, 1993; Tharp, 1998; and Lohfink & Paulsen, 2005).

The present study measures the relationship between mandatory counseling and adjudicated students' academic success. As opposed to students' self-reported post-intervention drinking levels, this study examined the objective, albeit indirect, relationship between an alcohol-intervention strategy and academic success as measured by improved grade point average (GPA) and higher-retention. The problems related to self-reported data on alcohol intake are therefore mitigated through this approach .

BACKGROUND AND PROCEDURES

This study, conducted at a Northeastern four-year college with an enrollment of 6,300, consisted of students found violating the campus alcohol policy either on campus or in the area adjacent to campus where many students rent houses during the academic year. Students' alcohol infractions were documented by resident assistants (in the case of students living in the residence halls) or campus police officers (in the rental neighborhoods or in the case of residential students who had additional, related violations that were considered more serious, such as combative behavior, distributing to minors, health and safety concerns, etc.). If the police were involved, legal measures outside of the campus judicial process may have also been imposed but in such cases, students also faced campus sanctions and this information was tabulated into the aggregate data. Any

legal repercussions were considered outside the scope of this paper. Alcohol violators, the subject of this study, were sanctioned with parental notification (if under 21 years of age), probation (similar to a written warning), a referral to a one-time, alcohol education group seminar (called AWARE), and counseling. Counselors were notified when alcohol violations took place and were given the names of the students, but it was the students' responsibility to schedule the appointments. While the sanctions were presented as mandatory, students did not always set counseling appointments.

Counseling sessions were conducted in accordance with brief intervention techniques. The focus was on reducing the negative consequences of alcohol-use rather than eliminating drinking altogether (Baer et al., 2001). The initial self-assessment was conducted with the use of the software program, *e-Chug, Electronic Check-Up to Go* (www.e-chug.com). Counseling sessions were fifty minutes in length and included common elements. Students were first asked to give an account of the events precipitating the disciplinary meeting. Counselors probed to get students to expound on how they experienced the sanctioning process, their parents reaction to their predicament, and their own reaction to it. Counselors explored the students' alcohol and other substance use, and ascertained if there was a family history of substance abuse. Attention was given to high risk behaviors such as binge drinking, impaired driving or riding with someone under the influence, and impaired sexual decisions with counselors providing feedback to the students. Counselors also worked with students to set goals to reduce the risk of further negative consequences.

Data pertaining to these referrals was collected and aggregated by the semester in which the violations occurred. Comparisons were made between those referrals who

attended a mandatory counseling session versus those who did not. Demographic and background variables were examined and controlled to determine whether attendance at such a mandatory session would yield greater academic success as measured by GPA at the end of the academic year and retention in the following Fall semester. This study used previously collected (secondary) data whereby identification of the subjects was stripped from all records. This satisfied conditions for a waiver of informed consent provisions by our internal review process.

Characteristics of Student Referrals

There were a total of 163 referrals to counseling (N=163), 93 during Fall semester and 70 during Spring semester. Participants represented both on-campus residents and students living off-campus. The majority of the referrals were freshmen, under the age of 21. Although the counseling sanction was consistently communicated as “mandatory” (as were all sanctions) throughout the adjudication process and in the students’ final judicial outcome notification, not all students reported to the counseling center. Seventy-eight percent of the participants met with a counselor (127 students) but 22% (36) either did not schedule an appointment or scheduled but did not appear for their session. This latter group served as a control group and allowed for a comparison between these students and those who attended a counseling session.

Referrals v. Student Body

The institution at which this study took place has a primarily homogeneous student population. In the year studied, the freshman class was 66% male, 94% White,

and primarily traditional college-aged with over 68% of the class under age 20. Although not all students at the institution are required to take the SAT, for those who did report such scores, the average combined SAT score was 915. The average cumulative GPA of the freshman class as of the end of the Spring semester was 2.64. In comparison with the profile of the freshman class, student referrals were, as could be expected, predominantly male (84.7%) and white (92.6%). The referral group was slightly younger than the average freshman class with 73% age 20 or younger. The average SAT score of the referral group that took the SAT (114 students) was 928, in fact, better than that of the freshman class as a whole. The overall average GPA of this referral group was 2.26, significantly lower than that of the freshman class.

Attendees v. Non-Attendees

As the population within this study was not randomly determined or assigned, it is paramount to compare the two groups to determine whether the differences between those who attended counseling sessions versus those who did not attend counseling were due to chance or other demographic factors unrelated to the intervention itself. Due to the nominal level nature of the data, a series of 2 x 2 chi-square contingency tables were prepared to test the actual vs. expected distributions between those who attended and those who did not attend counseling sessions on the above demographic and academic variables. Chi-square tests were performed on the data for race, gender, and age and significance tests were performed at the .05 level. In each instance, race, gender, and age, the chi-squares were not significant indicating that no demographic differences were apparent between those who attended and those who did not attend a counseling session. Other background predictors such as whether or not a student worked, family size, total

number of academic deficiencies, high school class rank and high school course of study (major) were also evaluated using chi-square analyses, and, as with the other variables, did not yield any significant differences between the two groups. Analysis of two other variables, SAT scores and total financial aid received were conducted using a difference of means t-test and these also yielded no significant differences between those who attended and did not attend a counseling session . (see Table 1).

(INSERT TABLE 1 HERE)

TABLE 1

Analysis of the Differences between those Attending vs. those Not Attending
Counseling Sessions by Selected Background Variables

<u>Chi-square</u>	<u>Not attended</u>	<u>Attended</u>	X ²	df	p
Age <=20	31	83	1.09	1	0.40
>20	8	34			
Race White	8	109	.03	1	1.00
Nonwhite	3	36			
Sex M	36	95	2.68	1	0.20
F	3	22			
Family Size					
0-4	25	71	0.14	1	0.70
Over 4	14	46			
Total Deficiencies					
None	13	50	2.56	3	0.46
One	16	48			
Two	8	13			
Three	2	6			
Worked					
Yes	19	71	1.49	1	0.22
No	16	37			
H.S. Class Rank					
Top 3 rd	3	18	2.09	3	0.55
Middle 3 rd	9	31			
Bottom 3 rd	21	52			
GED	1	2			
H.S. Major					
Academic	12	52	2.26	1	0.13
Not-academic	27	65			

Table 1 (continued)

<u>Mean differences</u>	<u>Not attended</u>		<u>Attended</u>		t	p
	<u>N</u>	<u>Mean</u>	<u>N</u>	<u>Mean</u>		
SAT s.d.	28	898.57 121.37	79	940.88 123.12	1.58	0.12
Financial Aid s.d.	33	7,576 6,473	123	8,340 6,989	0.59	0.56

As revealed in Table 1, there was no statistical difference between the sample groups on each of the measured background variables indicating that these groups did not have any previous differences in demographic composition, academic background or working intentions.

Methods

Attendees were compared with non-attendees on a number of measures corresponding to academic success as measured in this study by higher GPA and retention in the institution the following Fall semester. GPA differences were measured between the two groups through a t-test while subsequent linear regression explored the potential predictive capability of background variables on cumulative GPA. From a retention perspective, a chi-square analysis further compared those who attended/not attended with those who returned/not returned for the following Fall semester. Certain predictor variables were further determined and subjected to a logistic regression analysis in order to examine the relationship these may have with retention.

GPA Differences

Unlike the other background, academic and work variables, an examination of the cumulative GPA differences between these two groups revealed significant differences. Table 2 displays the average cumulative grade point averages (GPA) of those students who attended and did not attend a counseling session for each of the Fall and Spring semesters.

[INSERT TABLE 2 HERE]

TABLE 2

Means and Standard Deviations of Average Cumulative GPAs of those Attending and Not Attending Mandatory Counseling Sessions

	Attendees			Non-Attendees			t
	N	M	SD	N	M	SD	
Fall Semester	(70)	2.18	.89	(23)	1.40	1.19	2.89**
Spring Semester	(57)	2.40	.85	(13)	1.08	1.27	3.57**

**p<.01

For those who were referred in the Fall semester, the end-of-year average cumulative GPA of those who did attend a counseling session was 2.18, compared with an average cumulative GPA of 1.40 for those who did not attend. Subjecting these means to a t-test for the difference of means (two-tailed test) yielded a t-value of 2.89 ($p < .01$). This finding indicates that, for those students who were referred in the Fall semester, there was a significant difference in average cumulative GPA by the end of the academic year between the groups that attended a counseling session compared with the group that did not attend. The differences in average cumulative GPAs was replicated in the Spring (see also Table 2). Results revealed an average cumulative GPA of 2.40 for students who had attended a counseling session compared with an average cumulative GPA of 1.08 for those who did not attend. This yielded a t-value of 3.57 ($p < .01$). Again, the GPA of students for this Spring semester, revealed that students who attended the counseling session tended to complete the academic year with a higher GPA than those who did not attend a counseling session. As was mentioned above, the cumulative GPA was 2.64 for the entire freshmen at the end of the spring semester.

REGRESSION RESULTS

Although it appears that the attendees had significantly higher GPAs than the non-attendees, this outcome may be attributable to factors other than the intervention itself. To explore whether these factors had a predictive relationship to the outcome of improved Spring cumulative GPA, an exploratory linear regression analysis (using a

SPSS “enter” method) was undertaken incorporating the following possible predictors of cumulative GPA at the end of the Spring semester.

1. Family size
2. SAT Composite Scores
3. The total amount of financial aid the student received
4. Spring Semester credits attempted
5. Total of entering student deficiencies in math, English and Reading (range from 0 for no deficiencies to 3 deficiencies)
6. Intention to work while in school (1=worked; 0=not worked)
7. Whether or not student attended a counseling session (1=attended; 0=not attended)
8. Graduation rank in top third of high school class (1=top 3rd; 0=not in top 3rd)
9. High School major program of study (1=Academic; 0=not academic)

Since SAT scores are not required for all majors, these scores did not exist for every student and missing values were coded accordingly. In a similar manner, Spring semester cumulative grade point averages were not complete as some students left the institution prior to actually incurring any counted grades. Such scores were also counted as missing. However, zero grade point values for some students were included as legitimate representation of their cumulative grades at the end of the semester. Coding for missing data yielded a dataset of 104 usable cases. Dichotomous variables were coded and compared with omitted reference groups containing the largest frequencies in accordance with the techniques discussed by Hardy (1993). Variables were placed into blocks and entered into the equation using the enter method. Multivariate multicollinearity, as reflected in the Tolerance, VIF and Condition Indices, did not appear to be a problem.

The explanatory regression model resulted in two significant models, the first of which established Spring credit hours attempted as a significant predictor of Spring GPA and the second of which showed that the counseling intervention had an additive influence on cumulative grades. This second model appears in Table 3.

(INSERT TABLE 3 HERE)

TABLE 3

Linear Regression for Model 2 Predicting Cumulative GPA

	b	Std. error	Beta	t	Sig
(Constant)	-0.59	0.89		-0.66	0.50
Total SAT	0.00	0.00	0.16	1.61	0.11
Total Financial Aid	0.00	0.00	0.01	0.21	0.82
Credits attempted	0.05	0.02	0.21	2.55	0.01
Family Size	0.02	0.05	0.03	0.37	0.70
Total deficiencies	-0.17	0.12	-0.14	-1.43	0.15
Saw a counselor	0.93	0.20	0.40	4.61	0.00
High School major	0.06	0.15	0.03	0.41	0.68
Working	-0.00	0.16	-0.00	-0.03	0.97

Dependent
Variable: Spring
Cumulative GPA

Model Statistics

R² change=.327

F chg

(8,95)=5.764***

Adj R²=.287

N=104

*p<.05 ***p<.001

This second model accounted for a significant R^2 change of .219. In this second model, **credits attempted** and the variable **saw a counselor**, that which was associated with attending the counseling session, were the only two significant variables influencing the Spring cumulative grade-point average. Of the two variables, **saw a counselor** had the higher beta weight (.415). This variable, which had entered the second model, has a b-value of .954 indicating that overall, when controlling for other factors, students who see a counselor could be expected to have a grade point average of .95 grade points higher than those who did not see a counselor. The adjusted R^2 of .287 indicates that the independent variables accounted for 28.7% of the variation in the dependent variable. Family size, hours intending to work in college, class rank, and type of high school program did not appear to have any significant influence.

Retention

In addition to analyzing the relationship between counseling and GPAs, another important factor of a successful academic experience is retention. Would students who attend a counseling intervention session be more inclined to return to college in the subsequent year than those who did not? Again, using a 2 x 2 chi-square contingency table and analysis, the difference between those who attended and those who did not attend was analyzed and compared with those who returned to the College.

[INSERT TABLE 4 HERE]

TABLE 4
Semester Referrals Returning the Following Fall Semester

FALL

	Returned		Not Returned		X ²
	N	%	N	%	
Attended	(56)	80.0	(14)	20.0	29.64***
Not Attended	(4)	17.4	(19)	82.6	

*** p<.001, 1 df

SPRING

	Returned		Not Returned		X ²
	N	%	N	%	
Attended	(56)	98.2	(1)	1.8	33.77 ***
Not Attended	(5)	38.5	(8)	61.5	

***P<.001, 1 df

The results indicated that there was a significant relationship between those who attended and those who did not attend a counseling intervention session with regards to returning to the College the following Fall semester. A comparison of the Spring enrollees produced similar results. For both semesters, those who attended a counseling intervention session were far more likely to return to college in the Fall term of the following academic year as compared with those who did not attend a counseling intervention session. The former group was retained the next academic year at a rate of 88% (112 out of 127) as compared to only 25% (9 out of 36) for the non-attendees.

In order to statistically examine whether any of the above items would successfully predict retention the following Fall semester, a two-stage process was undertaken. First, a point-biserial correlation was conducted between all potential predictor independent variables and the dichotomous criterion variable of retention (RET-1=retained the following Fall semester; 0=not retained). Variables that were significantly related to retention were **credits attempted**, $r=.327$, $p<.01$), **Spring cumulative GPA**, $r=.666$, $p<.01$), and **saw a counselor**, $r=.571$, $p<.01$). Upon further inspection, however, it appeared that two of the independent variables, **saw a counselor** and **Spring cumulative GPA**, were moderately (but significantly) correlated, creating a redundancy whereby a spurious finding may ensue. Consequently, an interaction term **saw a counselor*Spring Cumulative GPA** was created combining both **saw a counselor** and **Spring Cumulative GPA** and substituted into the equation to provide for greater model specificity.

These variables were then submitted into a logistic regression model. Logistic regression was chosen as the method of analysis given the dichotomous nature of the

dependent variable (**Retention**) together with the capability measuring the log-odds changes on the dependent by independent variables of any type. Multiple indicators of goodness of fit, log-likelihood, Hosmer-Lemeshow (1989), and the Wald test, were all produced in this study. Analysis was conducted using SPSS with variables introduced into the model using the enter approach. In accordance with data restrictions on logistic regression, cases with missing values were eliminated yielding a complete data set was created of 148 valid cases. Pseudo R^2 coefficient was derived using Aldrich and Nelson methodology (1984).

(INSERT TABLE 5 HERE)

As seen in Table 5, students who (1) had improved their GPA and who had also attended counseling and (2) students who had increased the number of academic credits attempted in the Spring semester were more likely to be retained in the subsequent Fall semester. This latter variable appears to be intuitive as students who increased their credit load may display a greater confidence in their ability to take on greater amounts of course workload than those who do not, correspondingly indicating in a more positive attitude toward their collegiate future. Of the two variables, however, the interaction term, students who increased their GPA and had also seen a counselor had the largest odds-ratio, revealing that, when controlling for the other variable, every one point GPA increase in Spring cumulative GPA for students who saw a counselor increases the odds of these students being retained by over 6.8 times. Conversely by comparison, for each credit increase in credits attempted would, when controlling for the interaction term, result in a 38% increase in a student returning the following Fall semester.

TABLE 5
Logistic Regression Variables related to Retention

	B	S.E.	Wald	Exp(B)
Spring Credits Attempted	0.32***	0.10	9.82	1.38
Saw counselor*Spring GPA	1.93***	0.32	36.15	6.87
Constant	-8.35	1.60	19.39	.003

Model Statistics

Pseudo R²=.561

Hosmer/Lemeshow=
X²=6.87, 8 df, p=.550

% correctly

classified=91.2%

-2LL=73.2 p<.001

N=148

***p<.001

DISCUSSION

The findings reveal that students who attended counseling tended to be more academically successful in GPA and retention, even though, as a whole, these students had no discernable difference in demographic backgrounds or incoming academic achievement. Credits attempted in the Spring semester was the only other variable that appeared to enhance GPA achievement among this group of adjudicated students. Somewhat surprisingly, not even incoming academic achievement measures, nor did any background variables influence academic outcomes. Indeed, students who engaged in the counseling process could be expected to have an average increase of .95 in the cumulative GPA they achieved, suggesting that this particular sanction, that is brief intervention counseling, shows an additive potential for academic success among offenders. Furthermore, the Spring Cumulative GPA, combined with the intervention, appeared to have an even stronger predictive relationship to retention. Brief intervention treatment, then, seemed to enhance the likelihood that students were retained into the Fall semester of the year subsequent to the alcohol incident.

As a one-time approach that followed a student population for only a single year, this study may simply be reflective of the class composition at that particular point in time. Further study in other higher education settings is strongly encouraged, as are longitudinal investigations to examine whether increased rates of degree-completion could be expected as a result of such interventions. The measure of academic success found in this study, does not necessarily mean that students drank less however, this is a reasonable supposition given the link between increased drinking and negative academic consequences (NACAAA, 2002c).

It is interesting that the group that was not counseled still experienced the sanctions of probation and parental notification but that these interventions did not have any relationship to a positive change in the students' GPA or retention levels. This raises questions about the utility of these two sanctions insofar as their relationship with academic success. Since these two sanctions are commonly found on many campuses, such a finding merits further study to ascertain whether such measures have any bearing on students' drinking behavior.

Judicial officers, alcohol educators, and counselors should find these results encouraging. As college campuses continue to look to change student drinking culture, such a model may present possible avenues for improved treatment and remediation. Continuing to evaluate disciplinary interventions such as those presented in this study will inform and empower campuses to address alcohol abuse in a more systematic manner.

CONCLUSION

The effectiveness and appropriateness of mandated counseling sessions is not without controversy, particularly within the counseling profession (Consolvo & Dannells, 2000; Freeman, 2001). The lack of empirical information has contributed to the reluctance of some to consider sanctioning students to any type of counseling intervention as a result of an alcohol infraction. Establishing an initial level of knowledge is critical in beginning to understand how counseling may offer a developmentally appropriate response for addressing alcohol abuse. The finding that students achieved higher average cumulative GPAs and were more likely to be retained after a mandated

counseling program, suggests that this effort may be useful to college administrators seeking ways to help students drink less and achieve more academically. While further research is warranted, student affairs administrators, judicial officers and counselors should find this study a useful contribute in the ongoing discourse of the appropriate and viable sanctions for addressing destructive drinking patterns.

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