Article

From Alert to Action: Evaluating the Impact of Suspension Alerts on First-Year Student Success

Journal of College Student Retention:
Research, Theory & Practice
1–20

DOI: 10.1177/15210251251358170
journals.sagepub.com/home/csr
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Abstract

In higher education, academic probation is used to classify students with grade point averages (GPAs) below a certain threshold (e.g., 2.0). Probationary status serves to notify students of worrisome academic performance and encourages future improvement. However, its effectiveness remains unclear, particularly for first-year students at risk of attrition. This study evaluates a new suspension alert system versus academic probation for first-year students. Students with GPAs below 1.5 receive a suspension alert, while those with GPAs between 1.5 and 2.0 are placed on probation. Using a regression discontinuity design, we compare students near the 1.5 cutoff to analyze subsequent term GPAs between groups. Results indicate that students who received the suspension alert had higher GPAs than probation students. We also found that a disproportionate number of Black and Hispanic/Latino students were placed on suspension alert compared to academic probation. These findings offer valuable insights into the efficacy of the new suspension alert initiative.

Keywords

academic probation, regression discontinuity, first-year students, early intervention

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Despite the increasing financial burden associated with obtaining higher education (Akers, 2020; NCES, 2023), many students fail to complete their degrees. Specifically, the 6-year graduation rate for first-time, full-time U.S. undergraduates stands at only 62.2% (Causey et al., 2022). While average retention rates are steadily increasing across the United States, first-year students are particularly vulnerable to attrition, with approximately one quarter not returning for their second year (National Student Clearinghouse Research Center, 2024). Academic performance is a significant factor among the challenges students face. Specifically, approximately 20% of first-year students obtain grade point averages (GPAs) below 2.0, which is a common threshold used to place students on academic probation (Gonzalez, 2022; Schudde & Scott-Clayton, 2016). Academic probation is defined as "…an in-between space flanked by satisfactory academic standing and mandatory withdrawal" (Arcand & Leblanc, 2011, p. 1). However, academic probation and suspension (i.e., dismissal) policies vary widely across institutions (Gonzalez, 2022). For example, while some universities grant students multiple semesters to increase their GPAs above the probation threshold, others may require that students remedy their academic performance in just one semester (Gonzalez, 2022). Often, students placed on academic probation who fail to increase their GPAs are dismissed from their institution (Ost et al., 2018).

The purpose of academic suspension and probation policies is also debated. For instance, some researchers suggest that academic suspension and probation policies may act as a mechanism to discourage students who are unlikely to graduate or succeed from further investing time and money in higher education (Sneyers & De Witte, 2017). However, it is estimated that higher education institutions lose approximately $10,000,000 in revenue due to attrition annually (Raisman, 2013). Thus, colleges are incentivized to retain their students. Similarly, some researchers argue that academic probation and related interventions aim to encourage academic improvement (Riad, 2024). Despite the intended encouragement behind probationary placement, students placed on academic probation perceive it as punitive and report feeling embarrassed and ashamed (Waltenbury et al., 2018).

Moreover, probationary policies do not impact all student groups equally. For instance, Cooper et al. (2022) found that Black students were more likely to be placed on academic probation compared to white students. Similar results have been found regarding Hispanic/Latino students, as these students were found to be disproportionately placed on academic probation compared to white counterparts (e.g., Burke León et al., 2019; Tovar & Simon, 2006). More recently, Brown and colleagues (2023) found that male students and underrepresented minority students were placed on probation at a higher rate compared to females and white students. Furthermore, these findings regarding gender disparities in academic probationary placement echoe results from Kamphoff et al. (2007), who observed that the percentage of female students on probation was less than 50%, despite females comprising approximately two-thirds of the student population.

Short- and Long-Term Effects of Probationary Placement

Although academic probation policies are instated at most higher education institutions (Moss & Yeaton, 2015), their effectiveness remains under scrutiny. For example, Hamman (2018) performed binary logistic regression to evaluate which demographic variables affect the academic recovery and persistence rate of first-year students placed on academic probation, finding that female students were less likely to persist compared to male students. Moreover, Black/African American students were more likely to persist compared to European American counterparts. Also, traditionally aged students were more likely to persist compared to nontraditionally aged students (i.e., students older than 25). Among students who ultimately returned (i.e., persisted), females were more likely to recover academically compared to males, while there were no significant differences in academic recovery across ethnicity or age group.

In addition to the logistic regression analysis described above, several studies have employed causal inference analyses to evaluate the effect of probationary placement on academic outcomes. For instance, Lindo et al. (2010) examined how academic probation impacts students differently based on demographic factors at a large Canadian university. Using a regression discontinuity design, Lindo et al. (2010) analyzed the impact of being placed on probation after students' first year. Results suggested that probationary placement significantly increased the likelihood of leaving the university; however, this effect was limited to male students and native English speakers. Furthermore, while probationary placement led to a notable GPA improvement of 0.23 in the following semester across the entire sample, it was also associated with a reduced likelihood of graduating within 6 years. These findings suggest that probation can improve short-term academic performance but may lead to a lower likelihood of persistence and graduation.

In addition, Albert and Wozny (2024) examined the effectiveness of academic probation on first-year students at the U.S. Air Force Academy, focusing on students placed on probation after earning a GPA below 2.0 in their first semester. The probation intervention included mandatory study hours, written academic improvement plans, and restrictions on leaving campus. Results from the regression discontinuity analysis indicated that students on probation experienced a statistically significant GPA increase in their second semester. However, this effect diminished over subsequent semesters, with no significant long-term impact on GPA through graduation or on cumulative GPA at graduation. Additionally, in contrast with the findings from Lindo et al. (2010), academic probation did not increase attrition during the second semester, suggesting that probationary placement may not lead to disenrollment or academic discouragement.

Moreover, Casey et al. (2018) investigated the impact of academic probation on student outcomes and course-taking behaviors at a large U.S. public university. Specifically, researchers employed a regression discontinuity design to analyze the effects of probationary placement for first-year students who obtained GPAs below 2.0 during their first term. Their findings suggested that probation did not affect

second-term enrollment and led to an average GPA increase of 0.2 points in the second semester, with greater gains for female students than male students. Notably, students on probation attempted fewer credits in their second semester, except for underrepresented minority students. Additionally, probation reduced the likelihood of enrolling in more challenging (200-level) courses in the following term, which highlights strategic course selection as a reactive response to academic probation.

Early Alert Systems

While research has explored the effects of academic probation on subsequent student outcomes, findings are generally mixed (particularly for whom and under what conditions) (e.g., Albert & Wozny, 2024; Casey et al., 2018; Lindo et al., 2010). As a result, there has been a growing shift in higher education away from traditional academic probation systems toward early alert notice systems. This trend is partly influenced by research that associates academic probation placement with lower 4-year graduation rates (e.g., Bowman & Jang, 2022). The negative stigma surrounding the term "probation," which carries connotations linked to the criminal justice system and deficit-based language, has further fueled this change. For example, a *Chronicle of Higher Education* article (Bellows, 2024) and a white paper from California State University, Fullerton (2021) both advocate for replacing "academic probation" with more neutral terminology such as "academic notice." Supporting this shift, the *Chronicle* article highlights Moorpark College's adoption of an "academic notice" system in 2023. Following this change, the college reported a 5% increase in semester-to-semester persistence among students receiving the "academic notice" letter compared to those who received an "academic probation" letter. This rebranding reflects a broader movement to reduce stigma and support students through more positive and proactive interventions.

The Present Study

Within the context of the university at which our study took place, concerns emerged regarding the efficacy of academic probation. Specifically, prior to 2019, all first-year students who obtained GPAs below 2.0 were placed on academic probation the following semester. However, institutional leaders felt that probationary placement was ineffective or perhaps too lenient for students with particularly poor academic performance (e.g., GPAs < 1.5). Thus, the present institution developed a new policy that classified first-year students with GPAs below 1.5 as being on "suspension alert," whereas students with GPAs between 1.5 and 2.0 were placed on academic probation. Specifically, students who fall into the "suspension alert" category receive a memo to inform them of their academic standing. However, other than differences in nomenclature, students who are placed on academic probation have the same repercussions as students who receive the academic suspension alert. Specifically, academic suspension alerts are not included on students' permanent academic records. Moreover, the notation

that appears on both groups of students' semester transcripts reflects "Academic Probation." The intention behind the suspension alert is for students to perceive this notification as being more serious than academic probation, thus encouraging them to take immediate action and improve their grades. However, since the new suspension alert system was implemented, no studies have investigated the extent to which this policy is effective in motivating students to bolster their grades. Moreover, it is currently unknown if and to what extent students placed on academic probation and academic suspension alert differ with respect to future academic performance.

The purpose of the current study was to evaluate the recently implemented suspension alert notification policy compared to academic probation for first-year students at a large public university in the Mid-Atlantic. This university is classified as an R2 institute, defined as having "…at least 20 doctoral research degrees that also have at least $5 million in total research expenditures…" (American Council on Education, 2025). Using a regression discontinuity design, the researchers examined the following research question: What is the effect of a suspension alert policy versus an academic probation policy on a student's subsequent term GPA (RQ1)? In addition, given prior research suggesting that certain subgroups are disproportionately placed on academic probation (e.g., Brown et al., 2023; Burke León et al., 2019; Tovar & Simon, 2006), we were also interested in examining whether the proportion of students on probation and suspension alert is approximately equivalent across ethnicity and gender (RQ2). The results of this study will contribute to the broader conversation on academic interventions, offering evidence-based insights that can help refine practices aimed at fostering student success during critical transition periods, particularly for first-year students. Moreover, if the suspension alert system is shown to be more effective than academic probation with respect to increasing students' following term GPA, this result would potentially support the argument to replace academic probation entirely, as suggested by the *Chronicle* article reviewed above (Bellows, 2024).

Method

The primary research question was addressed using quasi-experimental methodology. Quasi-experiments utilize nonrandom assignment to place units under various conditions (Cook et al., 2002). That is, nonrandom procedures such as self-selection (i.e., individuals choose to be in the treatment or control condition) or administrator selection (i.e., individuals are mandated to the treatment or control group by a researcher, administrator, teacher, etc.) are used to classify cases into treatment and control conditions. Results from quasi-experimental research are generally less robust than those from a randomized control study. However, research questions often necessitate the use of causal inference methods (e.g., regression discontinuity, difference-in-differences, propensity score matching) when random assignment is not possible (Cook et al., 2002). For the present study, regression discontinuity was employed. This technique is used to estimate causal effects by assigning treatment status based on a cutoff point in a continuous variable. Additionally, the sample utilized in this study and the assumptions

underlying the regression discontinuity method are discussed in the following section. Regression discontinuity analyses and associated assumptions were primarily tested using the rddtools package (Stigler & Quast, 2015) in R version 4.4.1. The rddtools package in R is a software toolbox designed to facilitate regression discontinuity design analyses. It provides functions for structuring data, estimating treatment effects, and visualizing discontinuities at the cutoff point. The code used for the present study was uploaded to a public GitHub repository titled regression_discontinuity_R (Herr, 2025).

Data

The data used in this study consisted of 1,923 first-year college students from a large public university in the Mid-Atlantic region who were placed on either academic probation ($N = 991$) or suspension alert ($N = 932$) at the end of their first fall semester. Specifically, the sample includes first-year students across four semesters: Fall 2019, Fall 2021, Fall 2022, and Fall 2023. Students from Fall 2020 were excluded due to the disruptions caused by COVID-19, which resulted in leniency regarding the invocation of probation and suspension policies. First-year students are defined as those who have earned 27 or fewer total credit hours. Transfer students were excluded from the sample. Prior research has demonstrated that transfer students experience unique social and academic challenges, which may manifest as "transfer shock" (Hills, 1965). The term transfer shock refers to the phenomenon where transfer students obtain lower GPAs in their first semester than in subsequent semesters. Thus, to mitigate the potential effects of transfer shock and to improve sample homogeneity, transfer students were excluded.

For this study, first-year students were placed on suspension alert if their GPA fell below the suspension threshold of 1.5 at the end of their first semester, whereas those whose GPA fell between 1.5 and 2.0 were placed on academic probation. That is, students' fall semester GPAs were the determining factor for assignment to either probation or suspension alert. Thus, the GPA range for suspension alert was 0–1.499, whereas the range for probation was 1.5–1.999. The outcome variable of interest was the term GPA earned during the following spring semester (i.e., the GPA from the semester immediately after the probation or suspension alert), which was measured on a 0–4 scale.

To ensure that the two groups (i.e., suspension alert and probation) were balanced on relevant demographic and background variables, several covariates were included in the analyses, including ethnicity, gender, first-generation status, and total credits accumulated. Table 1 provides descriptive statistics across the two treatment groups. However, to protect students' privacy, several groups with sample sizes below 15 are not included in the table below. Specifically, students who were identified as Hawaiian or Other Pacific Islander, and students who indicated that their gender identity is "Other" or "Prefer not to specify" are not shown in Table 1. Importantly, these students were still included in the analyses.

Table 1. Descriptive Statistics Grouped by Academic Standing.

	Probation		Suspension alert	
Variables	*N*	%	*N*	%
Ethnicity				
American Indian or Alaska Native	18	1.82	13	1.39
Asian	114	11.50	103	11.05
Black	77	7.77	126	13.52
Hispanic or Latino	68	6.86	93	9.98
Not Hispanic or Latino	63	6.36	46	4.94
Not Specified	24	2.42	10	1.07
White	625	63.07	538	57.73
Gender				
Female	438	44.20	403	43.24
Male	552	55.70	527	56.55
First Gen Status				
No	829	83.65	800	85.84
Yes	162	16.35	132	14.16
	M	*SD*	*M*	*SD*
Total Credits	14.30	4.57	9.84	6.05

Note. Total credits = total credits accumulated at the time the student was placed on probation or suspension alert.

Analytic Procedure

Given that students were automatically assigned to either the suspension alert or probation group based solely on their fall term GPA, a regression discontinuity design was determined to be the most suitable approach. This design allows for the evaluation of whether the cutoff for suspension alert/probation has a significant impact on students' GPA in the following term. Let X_i represent the fall term GPA for student i. The binary treatment indicator, D_i, is equal to 0 for students with GPAs between 1.5 and 1.999 (i.e., $X_i \geq c$), whereas $D_i = 1$ for students with GPAs between 0 and 1.499 (i.e., $X_i < c$). The equation for the regression discontinuity model can then be presented as

$$Y_i = \beta_0 + \beta_1(X_i - c) + \delta D_i + \beta_2[(X_i - c) \times D_i] + \varepsilon_i, \quad (1)$$

where Y_i is the outcome variable (spring term GPA) for student i, β_0 is the average outcome at the cutoff point among students receiving academic probation (i.e., $D_i = 0$), β_1 is the average slope among students receiving academic probation, δ is the difference in the average outcome at the cutoff point among students receiving the suspension alert (i.e., $D_i = 1$) as compared to β_0, β_2 is the difference in average slope

among students receiving suspension alert as compared to β_1, and, ε_i is the term that represents residual error. The key parameter of interest, δ, represents the causal effect of receiving a suspension alert on spring term GPA at the cutoff point $c = 1.5$, conditional on assumptions.

Regression Discontinuity Assumptions

There are three key assumptions that must be met to make valid interpretations from the regression discontinuity analysis: the continuity assumption, the exogeneity assumption, and the functional form assumption. First, the continuity assumption requires that, conditional on treatment status (i.e., whether a student is placed on suspension alert or probation), the average potential outcome should be a continuous function of the assignment variable. Recall that the assignment variable is the student's fall term GPA that determines their probation or suspension alert status. To evaluate this

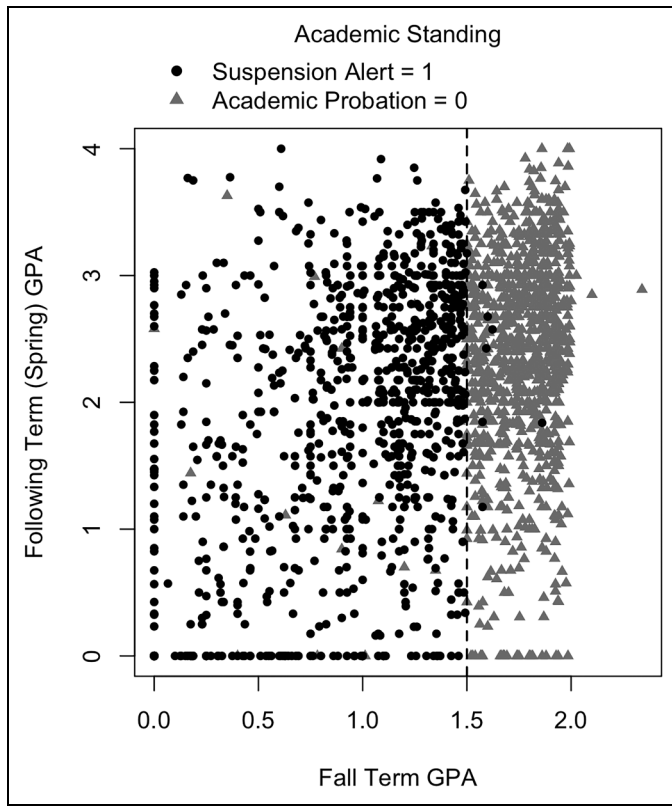

Figure 1. Scatterplot of fall term GPA and spring term GPA by academic standing. *Note.* Correlation between fall term GPA and spring term GPA = .320.

assumption, a scatterplot was created to visually examine the linear relationship between the assignment variable and the outcome variable (see Figure 1). Additionally, placebo tests were conducted to test for significant discontinuities in the relationship between the assignment variable (first semester GPA) and the outcome (second semester GPA) at points other than the cutoff of 1.5 (see Table 2).

Second, the exogeneity assumption requires that units to the left of the cutoff be equivalent to those to the right of the cutoff. Stated differently, within a given bandwidth, values near the cutoff should be essentially randomly assigned. For instance, a student on academic probation with a fall term GPA of 1.51 should be no different from a student on academic suspension alert with a fall term GPA of 1.49. This assumption was formally tested using McCrary's (2008) density test (see Figure 2). To further investigate this assumption, the relationship between the continuous covariate (total credits accumulated) and the assignment variable (fall term GPA) was examined to ensure that it was smooth around the 1.5 GPA cutoff (see Figure 3). For categorical covariates (i.e., gender, ethnicity, and first-generation status), standardized mean differences between the treatment and control groups were assessed to determine the degree to which the two groups were balanced. Standardized mean differences greater than |.10| indicate a significant imbalance (Stuart et al., 2013; see Table 2).

Finally, the functional form assumption requires that the model correctly specifies the functional form of the relationship between the assignment variable (fall GPA) and the outcome (spring GPA). This assumption was tested by fitting models with different forms, including linear, quadratic, and interaction terms with the treatment

Table 2. Standardized Mean Differences Across Academic Standing Groups for Categorical Covariates.

	Academic standing		
Covariates	Suspension alert	Probation	Std. mean diff.
Ethnicity			
American Indian or Alaska Native	0.014	0.018	−0.036
Asian	0.111	0.115	−0.014
Black	0.135	0.078	**0.168**
Hispanic or Latino	0.100	0.069	**0.104**
Not Hispanic or Latino	0.049	0.064	−0.066
Not specified	0.011	0.024	**−0.131**
White	0.577	0.631	**−0.108**
Gender			
Female	0.432	0.442	−0.019
Male	0.566	0.557	0.017
First-Gen Status			
No	0.858	0.837	0.063
Yes	0.142	0.164	−0.063

Note. Standardized mean differences > |.10| are bolded.

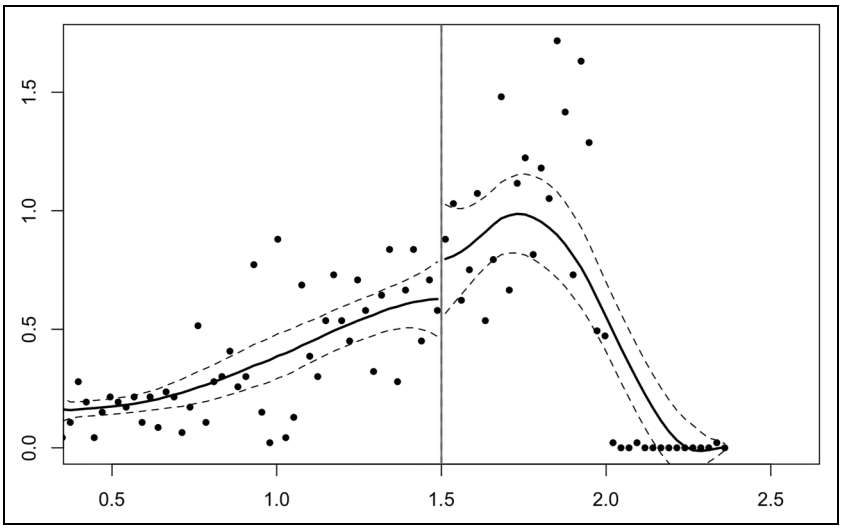

Figure 2. McCrary's test to examine the exogeneity assumption. *Note.* The *p*-value for McCrary's test was nonsignificant, indicating that the groups were equivalent around the cutoff point ($p = .102$).

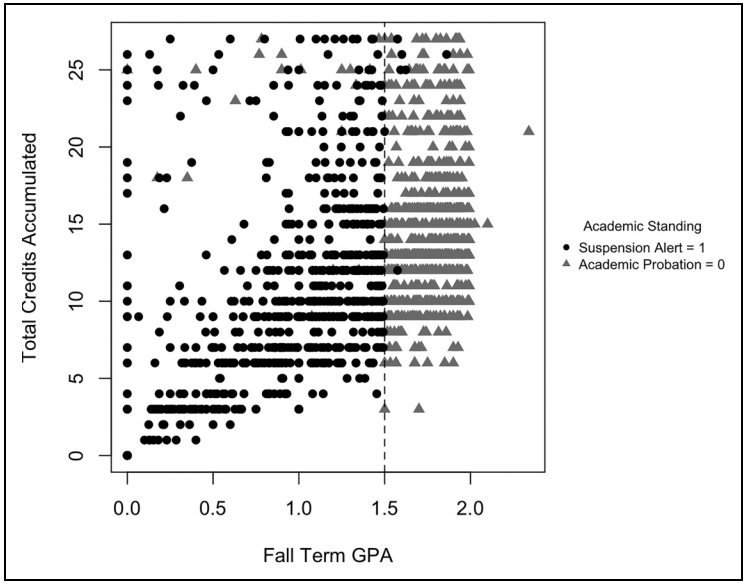

Figure 3. Scatterplot of fall term GPA and total credits by academic standing.

variable. To determine the best-fitting model, a series of nested ANOVA models compared whether a more complex model (incorporating quadratic or interaction terms) provided a significantly better fit than a simpler model. If the more complex model did not significantly improve the fit, the simpler model was preferred. It is worth noting that although the championed model may contain covariates, interaction terms, or nonlinear relationships, the parameter of interest remains the difference in intercepts at the cutoff point (i.e., slopes and their interpretation are not explicitly of interest other than ensuring appropriate functional form).

Results

Assumption Testing

First, we must acknowledge that the data exhibited mild fuzziness (see Figure 4). Fuzziness refers to imperfect compliance regarding the assignment of cases to the treatment or control group (Trochim, 1984). In cases where data exhibit fuzziness, some units that should belong to the treatment group based on their value on the assignment variable are instead classified into the control group, and vice versa. In the current study, fuzziness was due to extenuating circumstances that override the standard guidelines of assigning a student to receive probationary or suspension alert status. Specifically, of the $N = 991$ students who were not placed on suspension alert, $n = 19$ (1.9%) were incorrectly classified (i.e., should have been placed on suspension alert given their fall term GPA was below 1.5). In contrast, of the $N = 932$ students who were placed on suspension alert, $n = 8$ (0.9%) were incorrectly classified (i.e., should

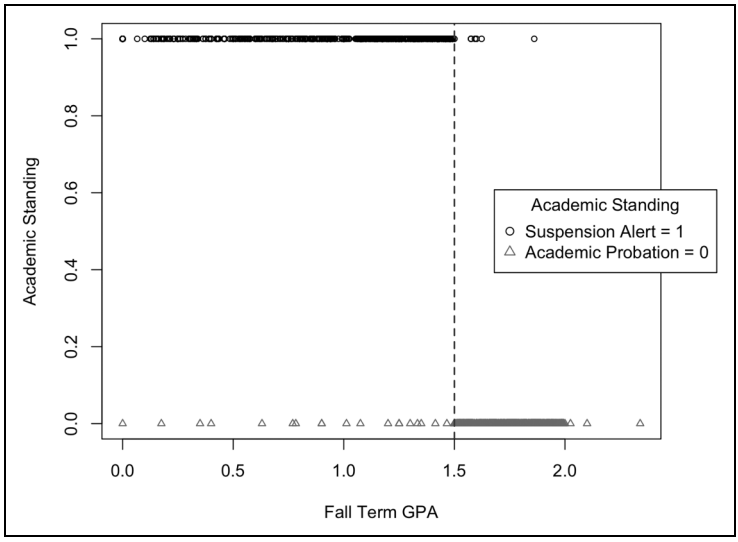

Figure 4. Assignment variable (fall term GPA) by academic standing.

not have been placed on suspension alert given their fall term GPA was above 1.5). Although treatment noncompliance was rare, a two-stage least squares approach was used to appropriately handle the limited amount of fuzziness (Imbens & Angrist, 1994). In the first stage, observed treatment received D_i was regressed on the running variable and a strict treatment assignment variable Z_i (i.e., $Z_i = 1$ if $X_i < c\perp D_i$, $Z_i = 0$ if $X_i \geq c\perp D_i$). Next, model-implied predicted values of $\widehat{D_i}$ are incorporated in the second stage model (e.g., Equation 1).

The continuity assumption was assessed in part by visually inspecting a scatterplot that displayed the relationship between the assignment variable (fall term GPA) and the outcome variable (spring term GPA; see Figure 1).

The relationship appeared to be mostly smooth and linear, with a weak positive correlation of 0.320 between the assignment variable and the outcome variable. It is important to note that, although the relationship in Figure 1 may seem somewhat nonlinear, the two continuous variables (GPA and fall term GPA) have restricted ranges. Specifically, the fall term GPA (on the *X*-axis) is constrained within a narrow range, with almost all students having GPAs between 0 and 2.0. This restriction in range reduces the variability in the data, which in turn weakens the linear relationship. However, the linearity of the relationship appears to be adequate, which supports this assumption. In addition, the continuity assumption was evaluated by conducting placebo tests to identify any cutoff points, other than 1.5, that might exhibit significant discontinuities. Placebo tests were conducted using a range of cutoff points spanning from 0.5 to 1.885 in increments of 0.03; the results confirm that this assumption holds, as the only cutoff point displaying a significant discontinuity was 1.5.

In assessing the exogeneity assumption, McCrary's density test indicated no significant discontinuity in the density of observations near the cutoff point ($z = 1.631$, $p = .103$), suggestive that there was no manipulation of the cutoff point.

Subsequently, to ensure a smooth relationship around the 1.5 GPA cutoff, the relationship between the continuous covariate (total credits accumulated) and the assignment variable (fall term GPA) was modeled via a scatterplot (see Figure 3). Figure 3 shows that this relationship is indeed smooth around the cutoff. Specifically, there is no visible discontinuity or abrupt change in the vertical distribution of points at the cutoff line. That is, students just below and just above the 1.5 GPA threshold exhibit a similar range and pattern of total credits accumulated, suggesting that this covariate does not diverge at the threshold, which supports the assumption of exogeneity.

In addition, standardized mean differences between the treatment and control groups were assessed to check for balance on categorical covariates (see Table 2). The results indicated an imbalance in four ethnicity covariates (Black, Hispanic/Latino, Not Specified, and White). Specifically, the academic suspension alert group had a significantly higher proportion of Black and Hispanic/Latino students compared to the academic probation group, while the academic probation group had a significantly higher proportion of white students and those who did not specify their ethnicity compared to the academic suspension group. This analysis addresses RQ2, indicating that the proportion of students on probation or suspension alert does in fact differ by

ethnicity. To address this imbalance, ethnicity was included as a covariate in the regression discontinuity model to control for any potential confounding effects.

To examine the functional form assumption, several model specifications were considered, including linear and quadratic forms of the assignment variable, as well as an interaction between treatment and the assignment variable. The linear model including an interaction between treatment and the assignment variable did not fit significantly better compared to the baseline linear model (i.e., constraining β_2 to zero in equation 1). As a result, the linear model excluding an interaction between treatment and the assignment variable was used (i.e., not necessary to allow for different slopes between the treatment and control groups). Additionally, ethnicity was included as a covariate, given baseline imbalances for several ethnicities (see Table 2).

Regression Discontinuity Model

Given all assumptions for the regression discontinuity design were met without imposing a bandwidth and discarding units, results from the final model are based on the entire analytic sample, thus enhancing the robustness of the estimates. As displayed in Table 3, being assigned to the treatment group (suspension alert) significantly impacted subsequent term GPA compared to being assigned to the control group (probation). The parameter estimate for treatment status in the multiple regression model was 0.270 ($p < 0.001$). This result suggests that students placed on academic suspension alert, who are just below the 1.5 cutoff, earn a GPA that is 0.270 points higher in the subsequent term compared to students placed on academic probation who are just above the 1.5 cutoff. Stated differently, the treatment (i.e., being placed on suspension alert) causes the outcome (spring term GPA) to increase by approximately 0.270 points.

Table 3. Parameter Estimates and Associated Standard Deviation Errors, and *p*-Values for the Regression Discontinuity Analysis.

	Parameter estimate	Std. error	*p*-Value
Intercept	1.975	0.160	<0.001
Treatment effect	0.270	0.067	<0.001
Assignment variable	0.915	0.062	<0.001
Asian	0.149	0.169	0.377
Black	−0.001	0.170	0.996
Hispanic or Latino	0.213	0.173	0.218
Not Hispanic or Latino	0.208	0.179	0.246
Not specified	0.158	0.219	0.470
Hawaiian or other Pacific Islander	0.832	0.424	0.050
White	0.148	0.160	0.355

Note. Treatment effect = average difference in spring term GPAs between students on suspension alert vs. probation. Assignment variable = fall term GPA (centered). American Indian or Alaska Native was used as the reference group for the analysis.

Discussion

This article sought to answer two research questions. First, the researchers were interested in examining the effect of a new suspension alert system compared to an academic probation system with respect to subsequent term GPA (RQ1). In addition, given previous studies suggesting disproportionate academic performance by ethnicity and gender (e.g., Brown et al., 2023; Burke León et al., 2019; Tovar & Simon, 2006), the researchers investigated whether similar results were observed in our sample (RQ2).

Regarding the first research question, regression discontinuity analyses were conducted on a dataset of first-year students who were assigned to academic probation ($N = 991$) or academic suspension alert ($N = 932$) based on their fall semester GPAs (i.e., their first semester GPA). The outcome variable in this analysis was students' term GPAs the following spring. Students were placed on academic suspension alert if their fall term GPA was below 1.5, while those with GPAs between 1.5 and 2.0 were assigned to academic probation. The results of the regression discontinuity analysis showed a significant treatment effect: those assigned to the academic suspension alert group experienced an average increase of 0.270 GPA points in the spring term, compared to students placed on academic probation ($p < .001$). The average spring term GPA for the probation group is represented by the intercept estimate in Table 3 (1.975), whereas the average spring term GPA for the suspension alert group is 2.245, which is calculated by adding the treatment effect estimate (0.270) to the intercept. The findings suggest that students just below the GPA cutoff (placed on suspension alert), on average, earn a significantly higher GPA the following spring term than students just above the cutoff who are placed on academic probation. In other words, the suspension alert program appears to be an effective strategy for encouraging students to improve their GPAs to avoid more severe academic consequences, such as suspension. This result also suggests that academic probation may be less effective than the academic suspension alert system with respect to increasing students' following term GPAs, even though the two programs differ only in name.

In addition, the second research question was examined while assessing the assumptions for our regression discontinuity analysis. Specifically, the continuity, exogeneity, and functional form assumptions were assessed and adequately met for the full dataset, with one exception. Standardized mean differences between the treatment and control groups revealed a difference greater than |.10| in several ethnicity categories, including Black students and Hispanic/Latino students. This issue was addressed by including ethnicity as a covariate in the regression model for the regression discontinuity analysis. However, although this disparity was addressed in our analysis, the finding that Black and Hispanic/Latino students were disproportionately more likely to obtain GPAs less than 1.5 corroborates prior studies which suggested that these student groups were overrepresented when examining students with GPAs below 2.0 (e.g., Burke León et al., 2019; Tovar & Simon, 2006). Additionally, in the present study, no differences in group assignment were found across gender.

Taken together, these results suggest that the suspension alert system may be a more effective early intervention strategy than academic probation for supporting students with low GPAs. While the probation group served as the comparison condition in our analysis, the lack of a significant improvement in their average spring GPA suggests that being placed on academic probation may not provide students with the necessary motivation or support to raise their GPA.

Limitations and Future Directions

There are several important limitations to the current regression discontinuity study that should be considered. First, there are several limitations regarding the generalizability of the findings. For instance, this study focused on traditional incoming first-year students and only examined the impact of probationary or suspension alert placement after their first (fall) semester. Therefore, transfer students and first-year students placed on suspension alert or probation after a spring semester were excluded. Thus, the study could be broadened to investigate the effects of the suspension alert system on transfer students or non-first-year students, such as those in their second, third, or fourth year. Additionally, the current study only assessed the impact of the suspension alert system on a student's subsequent term GPA. While the treatment effect was positive, conclusions cannot be made with respect to the long-term effects on enrollment, graduation rates, retention, or GPA beyond the semester immediately following placement on probation or suspension alert. Thus, the current study could be expanded by exploring these long-term outcomes. For example, future research could examine whether such placements predict a student's likelihood of being dismissed or suspended in subsequent terms, or whether previous placement on suspension alert or probation influences future assignment to suspension alert or probation.

Another limitation of the present study is its reliance solely on quantitative data. Although the regression discontinuity design provides strong evidence of a treatment effect, it does not allow for an in-depth understanding of students' perceptions of the suspension alert versus academic probation. Future studies could incorporate a qualitative component (e.g., interviews or focus groups with students placed in each condition to better understand how these notifications are interpreted and whether the suspension alert is indeed perceived as a stronger motivator. Alternatively, experimental methods such as vignette-based designs may offer another approach to testing theoretical assumptions about how students may hypothetically respond to different types of academic standing notifications. Qualitative data collection could also help with a more thorough and in-depth examination of the academic experiences of Black and Hispanic/Latino students, who were overrepresented in the suspension alert group relative to their respective subgroup sizes. A focus group with these students, for example, could help illuminate shortcomings of the university with respect to how it serves underrepresented minority students.

Finally, although the primary focus of this study was to assess the effectiveness of the suspension alert system, the comparatively lower GPA outcomes for the probation

group warrant further exploration. One limitation of this study is that it does not evaluate whether probation is ineffective in absolute terms, only that it is less effective than suspension alerts in this particular context. Future research should investigate the specific components of probation policies and messaging that may contribute to limited academic gains, and whether reframing or restructuring these interventions could improve outcomes for students placed on probation.

Conclusions and Implications

Despite aforementioned limitations, our study offers valuable insights and addresses the previously unanswered question of whether the new suspension alert program is effective with respect to increasing students' term GPAs. Furthermore, the findings suggest that the academic suspension alert system has merit and should continue to be implemented, particularly for first-semester, first-year students, as this was the population examined in the study. Critically, the study demonstrates the value in institutions continually assessing and improving the impacts, assumptions, and messages of their student success and retention strategies. Failure to locally evaluate one's approach to academic progress could result in unintentional impacts on a student's satisfactory academic progress, a university's student success measures, and importantly, may result in alienating practices and widening success gaps among student populations.

As implemented, the suspension alert system offers a relatively low-cost intervention for university administrators. The resources needed to design and implement the intervention were already allocated, and this is likely the case at most institutions. For example, institutions typically already have personnel responsible for tracking and supporting students on academic suspension and probation. The same personnel often manage communications to students, colleges, and advisors, and update the website detailing academic standing standards. Creating and maintaining a suspension alert system should involve minimal to no new resource investments.

Another potential benefit highlighted in this research is that the language of academic probation is not necessary and may warrant additional research. The words used to describe or frame a policy are not neutral and themselves have implications for how a policy is implemented and impacts communities. In fact, communication studies, particularly rhetoric, are a discipline that has been studying and making this case for centuries. For example, constitutive rhetoric suggests that our words don't just appeal to existing subjects or populations, but act to create and call them into being (Charland, 1987). In the context of higher education, the constitutive function of labels like first-generation student is beginning to be explored (Bollig, 2019). Within the realm of academic probation, some institutions have recognized the potential harm in using language like probation and are already replacing it with warning, alert, or notice (Steele, 2022). If using the language of probation calls forth a criminal rhetorical frame given its legal and criminal justice baggage and, as this study suggests, there is a possible comparative benefit on student GPA in using suspension alert over probation,

then institutions and researchers should continue to experiment with alternative academic standing policy rhetoric and consider abandoning the language of probation altogether.

In summary, this study emphasizes the potential of suspension alert systems as an effective alternative to traditional academic probation for first-year college students. By employing a regression discontinuity design, the analysis demonstrated that students placed on suspension alert experienced significantly greater improvements in their subsequent semester GPAs compared to their peers on probation, despite the two interventions differing only in name. These findings not only support the implementation of suspension alerts to foster academic improvement but also align with broader institutional efforts to promote positive student outcomes through early intervention. While the study's focus was on first-year students and short-term GPA changes, future research should explore long-term effects, including retention and graduation rates, to fully understand the impact of these academic policies. By refining and expanding such systems, higher education institutions can enhance their support for academically vulnerable students and improve overall student success rates.

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Funding

The authors received no financial support for the research, authorship, and/or publication of this article.

Declaration of Conflicting Interests

The authors declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

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