

Supplemental Information

SUPPLEMENTAL TABLE 2 Characteristics of Study Schools.

	School 1	School 2	School 3	School 4	School 5
Total enrollment	1504	1951	1030	2020	1650
% qualify for free or reduced price meals	90	91	90	85	64
% Latinx	93	93	73	99	68
% African American	2	6	1	1	23

SUPPLEMENTAL TABLE 3 Baseline Characteristics of AVID Arm by Number of Semesters of AVID Participation

	AVID Arm <i>N</i> = 124, %	0 Semesters <i>N</i> = 23, %	1 Semester <i>N</i> = 19, %	2 Semesters <i>N</i> = 82, %	<i>P</i>
Male	48	52	42	49	.80
Latinx	88	87	89	88	.97
Asian	4	0	0	6	.26
Born in US	95	96	95	95	.99
English first language	70	78	84	65	.16
≥1 parent born outside US	71	74	63	72	.71
2-parent household	77	74	68	79	.57
≥1 parent graduated high school	56	48	58	57	.90
≥1 full-time working parent	65	70	37	71	.02
MS Avid participant	27	22	32	27	.77
Mean eighth grade GPA	2.69 (0.57)	2.75 (0.53)	2.35 (0.51)	2.75 (0.57)	.02
Any fighting	27	26	37	26	.61
Any delinquency	38	35	63	33	.05
Any alcohol use	8	0	16	9	.17
Any marijuana use	6	4	11	6	.70
Any vaping device use ^a	8	4	5	10	.62
Any substance use ^b	15	9	21	16	.53

MS, middle school.

^a Vaping includes any use of a vaping device regardless of whether it was used to vape nicotine or cannabis.

^b Any substance use includes any positive response to items assessing any alcohol use, marijuana use, tobacco use, vaping device use, or other drug use in the previous 12 mo.

SUPPLEMENTAL TABLE 4 Intent-to-treat Regression Analyses Testing Intervention Effects on Risky Health Behaviors, Peer Social Networks, and Psychosocial Wellbeing

Outcome	OR or Coefficient	95% CI	P
Any substance Use	0.656	0.48 to 0.89	.006*
Any marijuana use	0.676	0.20 to 2.27	.53
Any alcohol use	1.079	0.32 to 3.59	.90
Any vaping device use	0.698	0.40 to 1.23	.21
30-d substance use	0.582	0.28 to 1.22	.15
30-d marijuana use	0.530	0.16 to 1.74	.30
30-d alcohol use	0.608	0.16 to 2.30	.46
30-d vaping	0.627	0.27 to 1.46	.28
Any fighting	0.630	0.30 to 1.34	.23
Any delinquency	0.648	0.42 to 0.99	.05
Proportion of friends who have been drunk	1.453	0.68 to 3.09	.33
Proportion of friends who have used marijuana	0.813	0.51 to 1.28	.38
Proportion of friends who have been drunk or used marijuana	0.945	0.73 to 1.23	.67
Has a friend who has been drunk	0.868	0.63 to 1.20	.39
Has a friend who used marijuana	0.762	0.57 to 1.02	.07
Has a friend who has been drunk or used marijuana	0.739	0.56 to 0.98	.03*
Proportion of friends engaged in school	1.253	0.96 to 1.64	.10
Proportion of friends who attend every class	1.270	1.00 to 1.62	.05
Proportion of friends who do not disrupt class	1.439	1.11 to 1.86	.006*
Proportion of friends who try hard in school	0.961	0.75 to 1.24	.76
Proportion of friends who think it's important to do well in school	0.939	0.70 to 1.26	.68
Proportion of friends who do not cause trouble	1.109	0.76 to 1.62	.59
Proportion of friends in AVID	1.363	0.63 to 2.93	.43
Has a friend engaged in school	1.728	1.11 to 2.70	.02*
Has a friend who attends every class	1.535	0.85 to 2.77	.15
Has a friend who does not disrupt class	1.229	1.07 to 1.41	.004*
Has a friend who tried hard in school	1.154	0.76 to 1.76	.51
Has a friend who thinks it's important to do well in school	1.032	0.73 to 1.47	.86
Has a friend who does not cause trouble	0.986	0.58 to 1.68	.96
Has a friend in AVID	2.19	1.01 to 4.73	.05
Mental health	-0.102	-0.29 to 0.09	.30
Stress	-0.15	-0.33 to 0.03	.11
Self-Efficacy	0.069	-0.09 to 0.23	.40
Grit	0.03	-0.19 to 0.25	.79
School Engagement	0.08	-0.11 to 0.27	.41

All models used intent-to-treat mixed-effects regression models with a random intercept for school and cluster-robust standard errors to account for clustering within schools, after adjusting for baseline values of the outcome of interest to test whether outcomes for students randomized to AVID differed from those randomized to the control group. *P values < .05.

SUPPLEMENTAL TABLE 5 Association Between AVID Intervention Group Assignment and Any Substance Use Controlling for Social Network Outcomes

	Model 1			Model 2			Model 3			Model 4		
	OR	95% CI	P	OR	95% CI	P	OR	95% CI	P	OR	95% CI	P
AVID Intervention Group	0.656	0.48 to 0.89	.006*	0.640	0.45 to 0.90	.011*	0.638	0.39 to 1.05	.075	0.767	0.50 to 1.17	.219
Has a friend engaged in school	—	—	—	1.26	0.78 to 2.02	.346	—	—	—	—	—	—
Has a friend who has been drunk or used marijuana	—	—	—	—	—	—	7.84	1.70 to 36.13	.008*	—	—	—
Has a friend in AVID	—	—	—	—	—	—	—	—	—	0.552	0.22 to 1.40	.211

—, not included in the model. All models used intent-to-treat mixed-effects regression models with a random intercept for school and cluster-robust standard errors to account for clustering within schools, after adjusting for baseline substance use. Estimates for AVID group assignment and the social network variable at follow up are presented. Similar models also adjusted for baseline values of the social network variable of interest and yielded nearly identical results (result not shown). *P values < .05.

SUPPLEMENTAL TABLE 6 Intent-to-Treat Regression Analyses Testing Intervention Effects on Psychosocial Wellbeing, Stratified by Sex

Outcome	Males			Females		
	Coefficient	95% CI	P	Coefficient	95% CI	P
Stress	−0.21	−0.40 to −0.02	.03*	−0.066	−0.29 to 0.15	.56
Self-efficacy	0.315	0.12 to 0.51	.002*	−0.132	−0.48 to 0.21	.45
Grit	0.282	0.04 to 0.52	.02*	−0.159	−0.42 to 0.10	.23
School engagement	0.232	0.05 to 0.41	.01*	−0.05	−0.26 to 0.16	.65

All models used intent-to-treat mixed-effects regression models with a random intercept for school and cluster-robust standard errors to account for clustering within schools, after adjusting for baseline values of the outcome of interest to test whether outcomes for students randomized to AVID differed from those randomized to the control group. *P values < .05.

SUPPLEMENTAL TABLE 7 Regression Analyses Testing Associations among the Number of Semesters of AVID Participation with Risky Health Behaviors, Peer Social Networks, and Psychosocial Wellbeing

Outcome	1 Semester of AVID			2 Semesters of AVID		
	OR or Coefficient	95% CI	P	OR	95% CI	P
Any substance Use	1.96*	1.38 to 2.79*	<.001*	0.40*	0.16 to 0.99*	.05*
Any marijuana use	2.04*	1.11 to 3.73*	.02*	0.42	0.04 to 4.71	.48
Any alcohol use	4.76	0.49 to 46.03	.18	0.75	0.25 to 2.23	.60
Any vaping device use	1.85*	1.37 to 2.50*	<.001*	0.30	0.05 to 1.65	.17
30-d substance use	1.94	0.97 to 3.88	.06	0.52	0.11 to 2.49	.41
30-d marijuana use	1.64	0.98 to 2.74	.06	0.38	0.04 to 3.88	.42
30-d alcohol use	3.00	0.35 to 25.69	.32	0.47	0.09 to 2.37	.36
30-d vaping	1.65*	1.23 to 2.22*	.001*	0.41	0.08 to 2.25	.31
Any fighting	1.43	0.66 to 3.10	.37	0.94	0.47 to 1.87	.85
Any delinquency	0.47	0.18 to 1.26	.13	0.92	0.69 to 1.23	.58
Proportion of friends who have been drunk	0.73	0.34 to 1.54	.41	1.35	0.54 to 3.36	.52
Proportion of friends who have used marijuana	1.17	0.68 to 2.02	.57	0.49*	0.28 to 0.84*	.01*
Proportion of friends who have been drunk or used marijuana	1.10	0.71 to 1.72	.67	0.67	0.39 to 1.14	.14
Has a friend who has been drunk	0.62	0.23 to 1.65	.34	1.16	0.71 to 1.90	.55
Has a friend who used marijuana	1.07	0.55 to 2.10	.83	0.67	0.40 to 1.13	.13
Has a friend who has been drunk or used marijuana	0.96	0.54 to 1.71	.88	0.79	0.53 to 1.16	.23
Proportion of friends engaged in school	0.72*	0.54 to 0.96	.03	1.87	0.66 to 5.27	.24
Proportion of friends who attend every class	0.62	0.35 to 1.08	.09	1.77*	1.04 to 3.02*	.03*
Proportion of friends who do not disrupt class	0.85	0.55 to 1.31	.46	2.06	0.94 to 4.53	.07
Proportion of friends who try hard in school	0.65*	0.52 to 0.82*	<.001*	1.35	0.73 to 2.49	.35
Proportion of friends who think it's important to do well in school	0.70	0.47 to 1.05	.09	1.34	0.52 to 3.45	.54
Proportion of friends who do not cause trouble	0.69	0.45 to 1.07	.10	1.63	0.69 to 3.85	.27
Proportion of friends in AVID	1.02	0.32 to 3.26	.97	1.87	0.95 to 3.67	.07
Has a friend engaged in school	1.21	0.80 to 1.83	.36	4.70*	2.21 to 9.97*	<.001*
Has a friend who attends every class	1.00	0.82 to 1.22	.99	1.92	0.87 to 4.21	.11
Has a friend who does not disrupt class	1.03	0.63 to 1.69	.91	1.65	0.96 to 2.83	.07
Has a friend who tried hard in school	1.19	0.69 to 2.06	.54	1.46	0.97 to 2.19	.07
Has a friend who thinks it's important to do well in school	1.32	0.63 to 2.80	.46	1.60	0.98 to 2.62	.06
Has a friend who does not cause trouble	0.60	0.26 to 1.37	.22	1.24	0.54 to 2.85	.62
Has a friend in AVID	2.52*	1.32 to 4.80*	.005*	4.31*	1.84 to 10.11*	.001*
Mental health	0.03	−0.06 to 0.11	.53	−0.14	−0.41 to 0.13	.32
Stress	−0.07	−0.29 to 0.15	.53	−0.05	−0.20 to 0.10	.51
Self-efficacy	−0.28	−0.96 to 0.40	.42	−0.02	−0.29 to 0.26	.89
Grit	0.11	−0.20 to 0.42	.50	−0.02	−0.20 to 0.16	.84
School engagement	−0.02	−0.35 to 0.31	.91	0.05	−0.07 to 0.18	.40

All models used mixed-effects regression models (linear and logistic) with a random intercept for school and cluster-robust standard errors to account for clustering within schools, after adjusting for baseline values of the outcome of interest. Models estimate whether the number of semesters of AVID participation is associated with each outcome, among AVID and Control study participants. *P values < .05.

SUPPLEMENTAL TABLE 8 Associations Among Naming an AVID Peer in the Social Network, Risky Health Behaviors, Psychosocial Wellbeing, and Social Network Outcomes Among High-Performing Students

Outcome	OR or Coefficient	95% CI	<i>P</i>
Any substance use	0.56	0.17 to 1.81	.33
Any marijuana use	0.62	0.12 to 3.20	.57
Any alcohol use	0.54	0.19 to 1.53	.25
Any vaping device use	1.42	0.12 to 16.62	.78
Any fighting	0.92	0.05 to 17.31	.95
Any delinquency	0.79	0.62 to 1.01	.06
Has a friend who has been drunk	1.20	0.48 to 3.02	.70
Has a friend who used marijuana	1.99	1.11 to 3.55	.02*
Has a friend who has been drunk or used marijuana	2.21	1.16 to 4.22	.02*
Has a friend engaged in school	1.05	0.53 to 2.07	.89
Has a friend who attends every class	0.77	0.33 to 1.83	.56
Has a friend who does not disrupt class	0.59	0.31 to 1.12	.11
Has a friend who tried hard in school	0.92	0.49 to 1.71	.78
Has a friend who thinks it's important to do well in school	0.85	0.38 to 1.91	.69
Has a friend who does not cause trouble	0.97	0.79 to 1.21	.82
Mental health	0.19	−0.09 to 0.48	.19
Stress	0.07	−0.33 to 0.47	.73
Self-efficacy	−0.07	−0.25 to 0.12	.48
Grit	−0.04	−0.27 to 0.19	.73
School engagement	0.02	−0.17 to 0.21	.83

All models used intent-to-treat mixed-effects regression models (linear and logistic) with a random intercept for school and cluster-robust standard errors to account for clustering within schools, after adjusting for baseline values of the outcome of interest. Models estimate whether naming an AVID-related peer is associated with each outcome, among those in the high-performing group. *P* values less than .05 are bolded.