Alternative and Regular Schools' Use of the Team Implementation Checklist

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Abstract

Can implementing school-wide Positive Behavior Support (SW-PBS) in high schools be facilitated by using Team Implementation Checklists? This analysis used data for the 2003-2004 school year from 42 high schools that provided office discipline referral (ODR) information electronically, over the Internet, using the School Wide Information System (SWIS, http://www.swis.org/) and had given permission for its use in research. About half (20) of the schools also reported their use of the Team Implementation Checklist (TIC) (http://www.pbssurveys.org/pages/TeamChecklist.aspx). A range of high schools serving students in grades 9 though 12 were represented and included schools from 13 states: California, Delaware, Florida, Hawaii, Illinois, Iowa, Maryland, Missouri, New Hampshire, New Mexico, New York, North Carolina, and Oregon. A total of 38,659 students were enrolled in these schools. Two types of measures were used: (a) TIC data on implementation of PBS features and (b) ODR data on suspensions and types of behavior problems. Descriptive statistics and correlations were used to study patterns within and across the two measures. Urban high schools, as well as rural and alternative high schools, are working on implementing Positive Behavior Support. Results indicated that: (a) high schools are using tools and technology related to school-wide PBS, (b) alternative high schools are serving students with very high rates of serious problem behaviors yet they are striving to implement PBS, (c) the TIC appears to be a valuable tool for studying on-going implementation efforts.

Alternative and Regular Schools' Use of the Team Implementation Checklist[1]

The *School-wide Positive Behavior Support Implementers' Blueprint and Self-Assessment* (Sugai et al., 2004, available online: http://pbis.org/main.htm), describes an approach to improving schools in ways that may enable more students to successfully complete high school. High school students with behavior problems often are suspended from school and may be expelled or sent to alternative schools (Morrison & D'Incau, 1997; Souza, 2000). Students' often react to school discipline negatively (Costenbader & Markson, 1997; Herzog, 2000; Hyman, Stefkovich, & Taich, 2002; Jeffries, Hollowell, & Powell, 2004; Mayer, 1995, 2002; Skiba & Peterson, 1999, 2000). Alternative high schools often have been recommended for students with behavior problems (Campbell, 2000; Heller, 1996; LaFee, 2000; Reavis, 1999; Souza, 2000), although the need is greater than the availability (Sughrue, 2003) even though a wide variety of different types of alternative schools exists (Foley & Pang, 2006; Gamble & Satcher, 2007; Huerta, Gonsalez, & D'Etremont, 2006; Hughes, & Adera, 2006; Menendez, 2007; Quinn et al., 2006; Raywid, 2004; Sinha, 2007; Tobin & Sprague, 2002; United States Department of Education, 2006).

School-wide positive behavior support, used systematically, is an approach that may enable high schools, alternative and non-alternative, to more effectively maintain order while including and instructing students whose behavioral issues put them at risk for exclusion (Eber, Sugai, Smith, & Scott, 2002; Netzel & Eber, 2003; Horner, Sugai, & Horner, 2000; March, Hawken, & Green, 2003; McCurdy, Mannella, & Eldridge, 2003; Scott et al., 2002; Sprague & Horner, 2006; Sugai, 2003, Sugai et al., 2004). Sugai and Horner (1992) identified four key elements of school-wide PBS: (a) practices supporting student behavior, (b) systems supporting staff behavior, (c) data supporting decision making, and (d) outcomes of social competence and academic achievement. PBS emphasizes four systems: (a) school-wide systems, (b) classroom systems, (c) non-classroom systems, and (d) individual student systems.

The research instrument used to assess the implementation of the school-wide system, the *Systems Evaluation Tool* (Sugai, Lewis-Palmer, Todd, & Horner, 1999; Horner et al., 2004), measures the extent to which expectations are defined, taught, and positively reinforced; systems for monitoring and responding to violations; use of data for making decisions; and administrative leadership. *Team Implementation Checklists* (TIC, Sugai, Horner, & Lewis-Palmer, 2001, http://pbis.org/tools.htm) cover features of both school-wide and individual student systems and is designed for use by school PBS teams as a formative evaluation activity, with Checklist #1, "Start-Up Activity" facilitating action plans for establishing essential elements of PBS and Checklist #2, "On-going Activity Monitoring" guiding sustained efforts. TIC is used by the school's PBS Team and monitors implementation of elements of both schoolwide and individual systems. At the schoolwide level, it is similar to the SET. The individual system (Todd, Horner, Sugai, & Colvin, 1999) within SWPBS is essential for secondary and tertiary level prevention and can be used within a Response to Intervention framework when the primary prevention level of school-side PBS is in place (Walker & Shinn, 2002). The TIC is less detailed at the individual level than the other tools for assessing capacity to provide individualized PBS systematically but

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[1] A presentation based on an earlier version of this paper was presented at the Association for Positive Behavior Support's Third International Conference on Positive Behavior Support, Reno, NV, March 25, 2006 (Tobin, 2006a).

it does enable school leaders to track key processes. (For a description and comparison of more detailed measures, see Tobin, 2006c).

Although school-wide positive behavior support is not a new concept, it is best known for effective use in elementary schools and middle schools (Lewis, Sugai, & Colvin, 1998; Metzler, Biglan, Rusby, Sprague, 2001; Scott & Barrett, 2004; Sugai & Horner, 2002; Sugai, Horner, & Gresham, 2002; Taylor-Greene & Kartub, 2000; Tobin, Lewis-Palmer, & Sugai, 2002; Todd, Haugen, Anderson, & Spriggs, 2002). Can high schools implement school-wide Positive Behavior Support (SW-PBS)? Does implementing SW-PBS in high schools impact behavior problems, suspensions, or office discipline referral (ODR) rates? Does the location (e.g., in a city or in a rural area) affect implementation? How are high schools that are attempting to implement SW-PBS using tools and technology, such as web-based reporting of Team Implementation Checklists and the School Wide Information System (SWIS, http://www.swis.org/)?

The reliability of the electronically submitted ODR data has been studied and reported as acceptable (Tobin et al., 2002). Office discipline referrals are valid indicators of school climate (Irvin, Tobin, Sprague, Sugai, & Vincent, 2004). A study of 1012 schools indicates social validity for using the online School Wide Information System (SWIS, http://www.swis.org/) in combination with the online PBS Survey (Tobin, 2006b). The TIC has not yet been studied as a measure for research, although it appears to be valuable for formative evaluation when used by school PBS teams. **The purpose of this report is to describe factors and outcomes related to the implementation of SW-PBS in alternative and regular high schools and to examine information provided on Team Implementation Checklists.**

Method

This analysis used data for the 2003-2004 school year from 42 high schools that provided ODR information electronically, over the Internet, using SWIS and had given permission for its use in research. About half (20) of the schools also reported their use of the Team Implementation Checklist (http://www.pbssurveys.org/pages/TeamChecklist.aspx).

Setting and Participants

A range of high schools serving students in grades 9 though 12 were represented and included schools from 13 states: California, Delaware, Florida, Hawaii, Illinois, Iowa, Maryland, Missouri, New Hampshire, New Mexico, New York, North Carolina, and Oregon. A total of 38,659 students were enrolled in these schools. Table 1 presents demographic characteristics (ethnicity and free or reduced lunch) in terms of the average percentage of enrolled students in the schools, based on information available from the National Center for Educational Statistics (NCES, http://nces.ed.gov/). Information from NCES also was used to classify the schools by type (regular or alternative) and, for the regular schools, by location (urban or rural). Although NCES uses a number of categories to describe location, for this study, schools located in or on the fringe of cities were classified as "urban" and schools located in small towns or rural areas, as "rural." The "regular" schools were all public schools, as were most of the alternative schools. Alternative schools for this study included all schools listed as "alternative" by NCES and one school not listed by NCES but identified from a web search as being a school affiliated with a

hospital for youth with mental illness. NCES reported alternative schools as being "Special Education" or "Other." All but one of the alternative schools were located in urban areas.

Table 1

Demographic Characteristics

	American Indian	Asian / Pacific Islander	Hispanic	African American	Caucasian	Free or Reduced Lunch
Average	1.27%	12.82%	13.69%	17.10%	55.77%	33.35%
SD	1.89%	2.45%	30.99%	28.94%	30.65%	22.81%

Data Collection and Analysis

Schools had previously submitted the data electronically over the Internet. Only schools that had agreed to have their data used in research were included. An extant database was queried to extract records of schools providing data on ODRs and on measures related to PBS. Of the PBS measures, only the Team Implementation Checklist #1, Start-Up Activity, had a sufficient number of records (20) for use in statistical analyses. Schools were grouped in two ways. First, as TIC schools if they provided TIC records, or as "NoTIC" schools if not. Second, schools were grouped as regular (further broken down as rural or urban) or alternative. Descriptive statistics and charts were used to study similarities and differences among the groups. In addition, correlations were calculated to study patterns of association among various measures.

Two types of measures were used: (a) TIC data on implementation of PBS features and (b) ODR data on suspensions and types of behavior problems. Although there are many different types of behavior problems that can lead to a trip to the principal's office for discipline, for this study the following categories were operationally defined:

"Violent" means referrals for aggression, fighting, harassment, bullying, property damage, vandalism, arson, or for weapons or combustibles.

"Antisocial, nonviolent" means referrals for inappropriate language, disrespect, lying, disruption, theft, or dress code violations.

"Tardy or Skipping" referred to ODRs for being late or missing classes.

"Tobacco, Alcohol, Drugs" referred to ODRs for use or possession of tobacco, alcohol, or drugs.

"Other & Unknown" means that that was what was listed for the offense or nothing was listed as the behavior leading to the referral.

"Minor" means that the behavior was specifically listed first as "minor" and then with the following additional descriptors: (a) inappropriate language, (b) contact, (c) disrespect, (d) disruption, (e) property misuse, and (f) other.

Rates of ODRs were calculated for the total number of ODRs for any reason and also for the different types of behavior problems. All rates are ((# odor/days) /students) * 100. This provides the number of ODRs for the type of behavior involved, per day, per 100 students. It makes it possible to compare across schools with different size enrollments and different numbers of school days.

Suspension was studied in three ways. The percentage of enrolled students who had been suspended out of school was determined. For the whole school, at the end of the year, the number of days of out of school and of in-school suspensions was tallied.

The Team Implementation Checklist has items grouped by features (see list below). For example, the feature "commitment" is measured by two items, administrative support and staff support. Respondents rate each item as being in place, partially in place, or not in place. "In place" ratings are scored as 2 points; "partially in place" as 1, and "not in place" as 0. The total number of points possible for each feature is calculated by multiplying the number of items by two. The percent of possible points for each feature can then be determined. Although it is recommended that TIC be completed quarterly, the actual number of TICs reported by the participating schools in the 2003-2004 school year ranged from 1 to 10. To compare across schools with different numbers of TIC reports, the average of possible points for each of the PBS features was calculated for each school. In addition, an "Overall" TIC score variable was created for each participating school by finding the sum of their averages for the features.

List of Items, Features, and Variables for the Team Implementation Checklist:

1. Commitment
   - Administrator's support and active involvement.
   - Faculty/Staff support
     (one of top 3 goals, 80% of faculty document support, 3 year timeline).
2. Establish and Maintain Team (Team)
   - Team established (representative).
   - Team has regular meeting schedule and effective operating procedures.
   - Audit completed for efficient integration of team with other teams/initiatives addressing behavior support.
3. Self-Assessment
   - Team/faculty complete Positive Behavior Support (PBS) Survey (http://www.pbssurveys.org/pages/SelfAssessmentSurvey.aspx) to self-assess the extent to which all systems are in place (School-wide, Non-classroom Settings, Classroom Settings, and the Individual Student System)
   - Team summarizes existing school discipline data.
   - Strengths, areas of immediate focus, and action plan are identified.
4. Expectations Defined
   - Three to five school-wide behavior expectations are defined.

5. Expectations Taught
- School-wide teaching matrix developed. (Specific examples of the expectations are linked to the common areas in the school.)
- Teaching plans for school-wide expectations are developed.
- Teaching plans for school-wide expectations are developed.

6. Reward System
- System in place to acknowledge/reward school-wide expectations.

7. Violations System
- Clearly defined and consistent consequences and procedures for undesirable behaviors are developed.

8. Information System
- Discipline data are gathered, summarized, and reported.

9. Function-Based Support System
- Personnel with behavioral expertise are identified and involved.
- Plan developed to identify and establish systems for teacher support, functional assessment and support plan development and implementation.

As an exploratory study, no hypotheses were formed to predict specific outcomes. Research questions, however, included the following:

1. How do regular and alternative high schools differ in ODR patterns?
2. Do urban and rural high schools face similar types of behavior problems?
3. How do the features of the TIC correlate with each other?
4. Is frequent use of the TIC report related to high scores indicating that PBS features are being implemented?
5. Are schools using the TIC report similar to schools that do not use the TIC report?
6. What are the types of behavior problems that schools are dealing with and how are the different types correlated?
7. How many days of in-school and out-of-school suspension are typical for different types of high schools?
8. What percentage of high school students, on average, are suspended from school?
9. Does the TIC appear to be useful (a) a research tool for studying PBS implementation in high schools and (b) as a resource for schools in addressing disciplinary concerns?
10. Based on ODR data patterns and TIC reports, do alternative schools appear to be the solution to the dilemma schools are facing when trying to maintain orderly and safe schools while providing positive behavior support to students at risk for school failure or exclusion due to behavioral issues?
11. Do regular and alternative high schools, on average, differ in the way they are implementing PBS, as indicated on in their TIC reports?

Results

Results are grouped into the following topics: (a) ODR patterns for regular and alternative schools with TIC reports, (b) characteristics of TIC reports, and (c) multiple comparisons looking at combinations of factors.

ODR Patterns for Regular and Alternative Schools

Charts and tables are used to describe ODR data using location and type information from NCES: (a) urban, regular high schools (Figure 1, Table 4), (b) rural, regular high schools (Figure 2, Table 5), and (c) alternative high schools (Figure 3, Table 6). Average rates for all schools (with and without TIC reports) are compared in Table 7, according to classification as "regular" or "alternative." Correlations are shown for (a) all schools, including alternative schools (Table 8), and (b) regular schools without the alternative schools (Table 9).

Table 4

Urban, Regular High Schools with Team Implementation Checklists Reported (n = 7): Percent of Students Suspended Out of School and Rates for Different Types of Behaviors

HS ID	% of Students Suspended Out-of-School	Violent	Antisocial Nonviolent	Tardy or Skipping	Tobacco, Alcohol, Drugs	Other & Unknown	Minors
2	0.13%	0.007	0.131	0.376	0.000	0.000	0.000
3	0.15%	0.022	0.136	0.017	0.001	0.023	0.000
8	22.69%	0.181	0.791	0.400	0.055	0.042	0.342
4	11.05%	0.032	0.254	0.251	0.011	0.053	0.000
7	15.09%	0.076	0.301	0.337	0.018	0.089	1.274
5	21.26%	0.034	0.793	0.186	0.004	0.011	0.000
1	7.89%	0.042	0.064	0.025	0.014	0.002	0.019
Average	11.18%	0.056	0.353	0.228	0.015	0.032	0.234
SD	9.16%	0.059	0.310	0.159	0.019	0.032	0.476

Figure 1. Rate by Type of Behavior Problem for Urban, Regular High Schools with TIC Reports
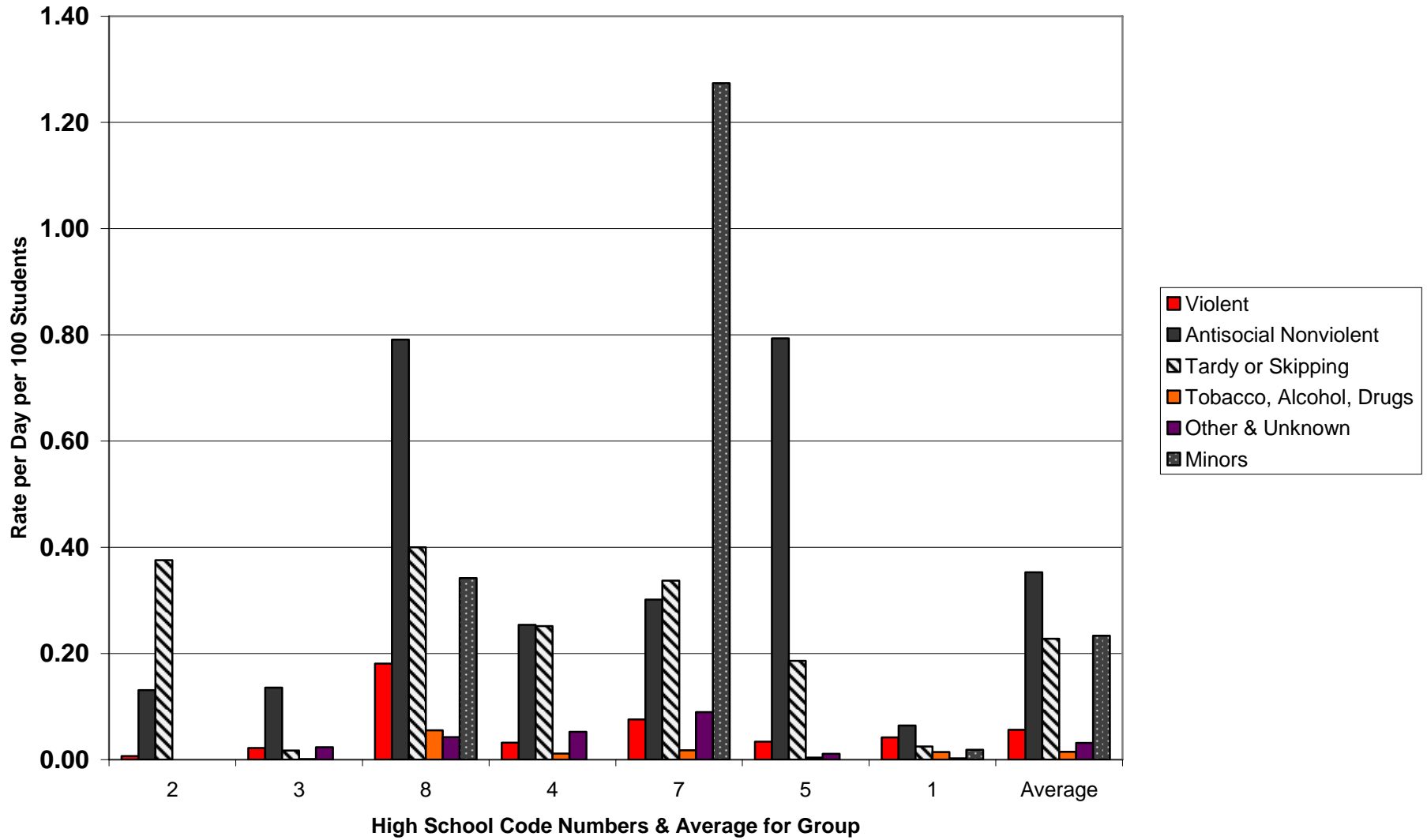
Table 5

Rural, Regular High Schools with Team Implementation Checklists Reported (n = 7):
Percent of Students Suspended Out of School and Rates for Different Types of Behaviors

HS ID	% of Students Suspended Out	Violent	Antisocial Nonviolent	Tardy or Skipping	Tobacco, Alcohol, Drugs	Other & Unknown	Minors
12	12.22%	0.057	0.243	0.234	0.073	0.032	0.000
15	2.16%	0.032	0.109	0.055	0.009	0.015	0.014
10 .		0.041	0.572	0.115	0.000	0.156	0.097
9	9.84%	0.066	0.333	0.670	0.026	0.142	0.229
11	3.00%	0.021	0.301	1.236	0.022	0.031	0.014
14	16.46%	0.122	0.381	0.698	0.058	0.182	0.014
13	8.29%	0.083	0.436	0.230	0.031	0.098	0.003
Average	8.66%	0.060	0.339	0.463	0.031	0.094	0.053
SD	5.47%	0.034	0.147	0.426	0.026	0.068	0.085

Figure 2. Rate by Type of Behavior Problem for Rural, Regular High Schools with TIC Reports
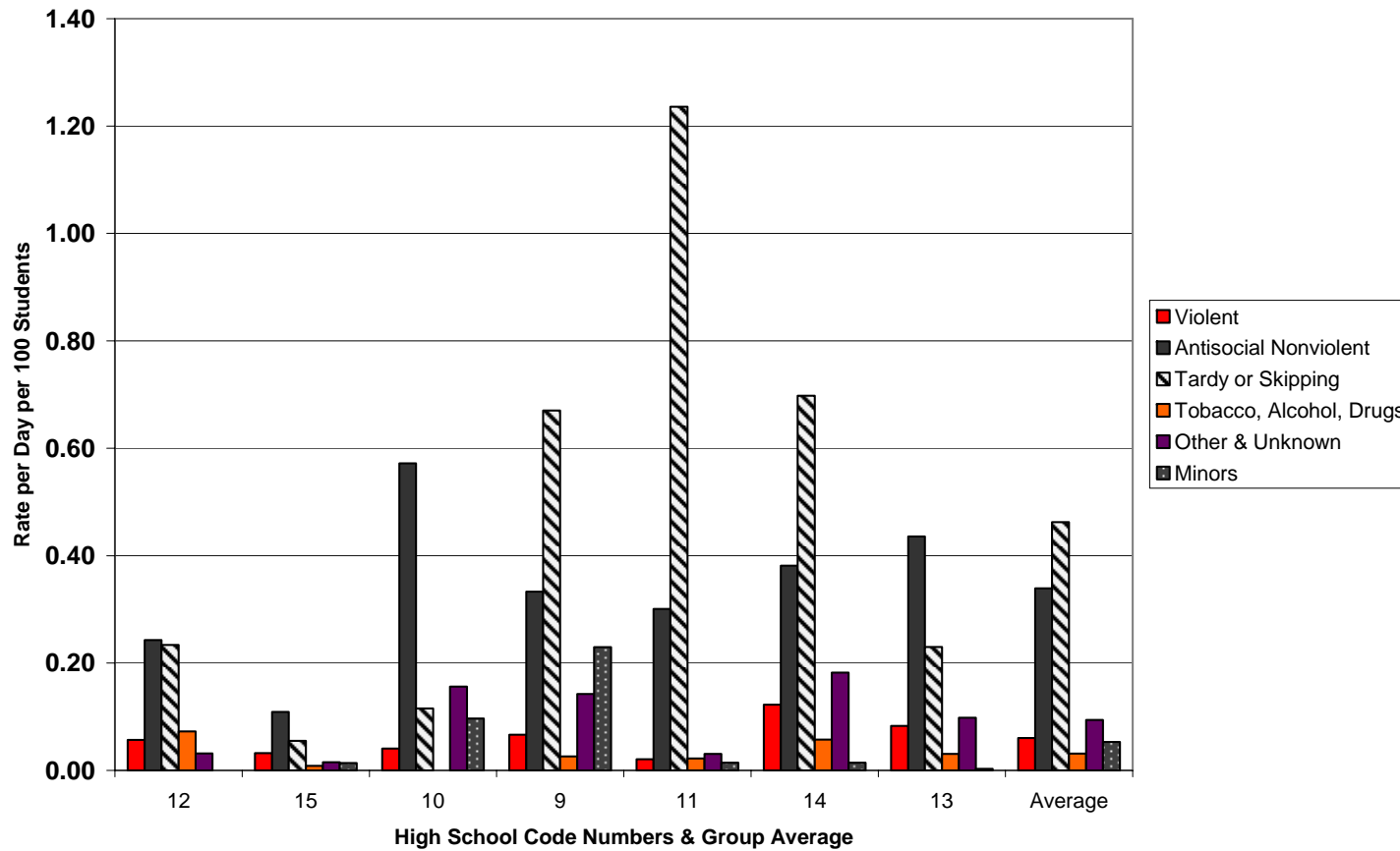

Table 6

Alternative High Schools with Team Implementation Checklists Reported (n =6):
Percent of Students Suspended Out of School and Rates for Different Types of Behaviors

HS ID	% of Students Suspended Out	Violent	Antisocial Nonviolent	Tardy or Skipping	Tobacco, Alcohol, Drugs	Other & Unknown	Minors
6	83.33%	0.882	6.377	2.090	0.142	0.142	14.669
21	40.30%	0.715	5.038	24.049	0.217	0.483	3.637
17	53.85%	0.264	1.633	0.484	0.119	0.414	0.000
18	70.37%	0.286	1.985	0.041	0.051	0.051	1.044
19	118.64%	0.250	1.088	0.010	0.067	0.039	1.213
16	1.10%	0.094	0.240	0.270	0.012	0.006	0.000
Average	61.26%	0.415	2.727	4.490	0.101	0.189	3.427
SD	39.94%	0.309	2.420	9.613	0.073	0.207	5.665

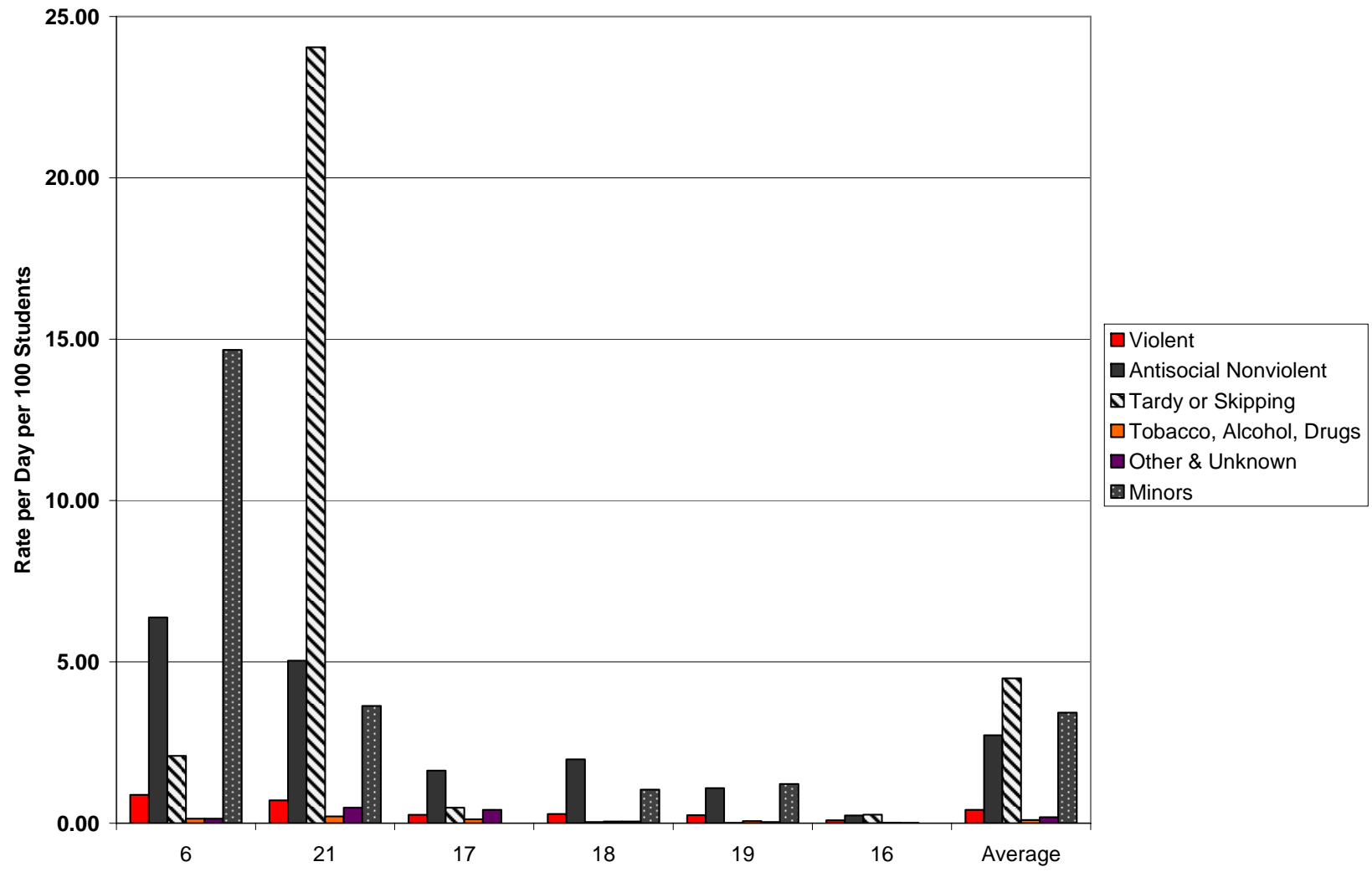**Figure 3. Rate by Type of Behavior Problem for Alternative High Schools with TIC Reports**

Table 7

Comparison of All Regular and Alternative High Schools (N = 42)

	Regular High Schools (N = 32)		Alternative High Schools (N = 10)	
	Average	Standard Deviation	Average	Standard Deviation
Percent of Students Suspended Out	10%	7%	63%	33%
ODR Rate	0.97	1.02	11.53	10.76
Days of In School Suspension	165	335	78	175
Days of Out of School Suspension	663	847	252	315
Number of Students	1130	589	249	529
Violent Rate	0.05	0.04	0.66	0.59
Antisocial Nonviolent Rate	0.34	0.36	3.88	3.36
Tardy & Skip Rate	0.41	0.56	3.06	7.42
Tobacco, Alcohol, & Drugs Rate	0.02	0.02	0.10	0.06
Unknown & Other Rate	0.06	0.11	0.37	0.45
Minor Rate	0.09	0.24	2.32	4.48

Table 8. *Pearson Correlation Coefficients for All Schools, Including Alternative (N = 42)*

	ODR Rate	Violent	Antisocial Nonviolent	Tardy & Skip	Tobacco, Alcohol, & Drug	Unknown & Other	Minor	Frequency of TIC Reports	Percent Suspended Out	Days Suspended Out	Number Enrolled
ODR Rate	1.00	0.67***	0.74***	0.76***	0.82***	0.52***	0.67***	0.43**	0.57***	-0.16	-0.38*
Violent		1.00	0.98***	0.27	0.70***	0.76***	0.36*	0.10	0.60***	-0.06	-0.22
Antisocial Nonviolent			1.00	0.35*	0.74***	0.77***	0.45*	0.15	0.60***	-0.06	-0.24
Tardy & Skip				1.00	0.65***	0.25	0.27	0.43**	0.12	-0.13	-0.25
Tobacco, Alcohol, & Drug					1.00	0.51***	0.51***	0.35*	0.59***	-0.13	-0.49**
Unknown & Other						1.00	0.06	-0.07	0.48**	-0.01	-0.11
Minor							1.00	0.53***	0.46**	-0.11	-0.28
Frequency of TIC Reports								1.00	0.21	-0.21	-0.19
Percent Suspended Out									1.00	-0.06	-0.45**
Days Suspended Out										1.00	0.54***
Number Enrolled											1.00

Note. ODR = Office Discipline Referral. The ODR rate and rates for all types of behavior problems listed on the referrals is calculated using the formula: (((referrals/days of school)/students enrolled)/*100) and indicates the number of referrals per day per 100 students.
*$p < .05$. **$p < .01$. ***$p < .001$.

Table 9. *Pearson Correlation Coefficients for Regular Schools (N = 32)*

	ODR Rate	Violent	Antisocial Nonviolent	Tardy & Skip	Tobacco, Alcohol, & Drug	Unknown & Other	Minor	Frequency of TIC Reports	Percent Suspended Out	Days of Suspension Out	Number Enrolled
ODR Rate	1.00										
Violent	0.73***	1.00									
Antisocial Nonviolent	0.90***	0.70***	1.00								
Tardy & Skip	0.92***	0.56***	0.78***	1.00							
Tobacco, Alcohol, & Drug	0.18	0.52**	0.08	0.13	1.00						
Unknown & Other	0.88***	0.64***	0.85***	0.06	0.06	1.00					
Minor	0.27	0.27	0.05	0.13	0.13	0.05	1.00				
Frequency of TIC Reports	0.09	0.27	0.07	0.05	0.05	0.05	0.45*	1.00			
Percent Suspended Out	0.59***	0.70***	0.66***	0.41*	0.45*	0.47**	0.26	0.11	1.00		
Days Suspended Out	-0.01	0.00	0.09	0.05	0.05	-0.04	-0.01	-0.19	0.44*	1.00	
Number Enrolled	-0.26	-0.39*	-0.27	-0.27	-0.41*	-0.35*	0.19	0.01	-0.09	0.48*	1.00

Note. ODR = Office Discipline Referral. The ODR rate and rates for all types of behavior problems listed on the referrals is calculated using the formula: (((referrals/days of school)/students enrolled)/*100) and indicates the number of referrals per day per 100 students.
*p < .05. **p < .01. ***p < .001.

Characteristics of TIC Reports

Rank ordered from high to low by Overall TIC score, scores for specific TIC features for each school using the TIC reports is shown in Table 10. The highest possible Overall TIC score would by 9. No school had that score but three of the 20 schools had scores over 8, eight had scores over 7, five had scores over 6, and three had scores over 5. Only two schools had lower Overall TIC scores. Table 11 shows how the features on the TIC are associated with each other.

Table 10

Team Implementation Checklist Data: Averages of Percent of Possible Points for Each SW-PBS Feature for Each High School

High School Code #	Commitment	Team	Self- Assessment	Expectations Defined	Expectations Taught	Reward System	Violations System	Information System	Function- Based Support System	OverallTIC*
11	1	0.79	1	1	0.83	1	1	0.75	1	8.38
19	1	1	1	1	0.83	1	1	0.5	1	8.33
12	1	0.94	1	1	0.94	0.83	1	0.67	0.75	8.13
18	1	0.83	0.83	1	1	1	0.75	0.75	0.75	7.92
10	1	1	1	1	0.83	0.67	0.67	1	0.67	7.83
8	0.63	0.98	0.98	1	1	1	0.94	0.5	0.72	7.75
2	0.75	0.83	0.87	1	0.58	1	1	1	0.69	7.72
17	0.5	1	1	1	0.33	1	1	1	0.5	7.33
4	0.75	0.83	1	1	0.89	0.33	1	1	0.5	7.31
1	1	1	0.72	1	0.58	0.67	0.83	1	0.5	7.31
15	1	0.94	1	1	0.94	0	0.5	1	0.75	7.13
9	0.58	0.72	0.78	1	0.72	0.67	0.67	1	0.75	6.89
6	1	0.97	1	0.8	0.63	0.7	0.45	0.6	0.5	6.65
16	0.95	0.87	0.33	1	0.47	0.8	0.8	0.4	0.75	6.37
21	0.75	0.67	0.83	0.95	0.65	0.95	0.5	0.5	0.25	6.05
3	0.75	0.83	0.42	1	0.25	1	0.5	0.5	0.5	5.75
13	1	0.83	0.5	1	0.5	0.5	0.5	0.25	0.38	5.46
5	0.75	0.63	0.83	0.7	0.57	0.3	0.5	0.4	0.5	5.18
7	0.57	0.67	0.45	0.71	0.5	0.64	0.64	0.43	0.21	4.83
14	0.75	0.33	0.29	0.38	0	0	0.25	0.5	0.31	2.81

*The OverallTIC score is a variable created by finding the sum of the averages of the features. Although it is recommended that TIC be completed quarterly, the actual number of TICs, as shown in the 2nd column, ranged from 1 to 10. To compare across schools, the average of possible points for each of the PBS features was calculated and is shown above.

Table 11

Correlations Among Variables Using Data from Schools (n = 20) Using the Team Implementation Checklists Reports

	Overall	Commit	Team	Self Assess	Define	Teach	Reward	Violations	Information	Function	Frequency
Overall	1.00										
Commit	0.33	1.00									
Team	0.80***	0.35	1.00								
Self Assess	0.77***	0.15	0.58**	1.00							
Define	0.82***	0.24	0.78***	0.46*	1.00						
Teach	0.78***	0.36	0.53*	0.74***	0.58**	1.00					
Reward	0.57**	-0.06	0.45*	0.22	0.56*	0.20	1.00				
Violations	0.79***	-0.01	0.56**	0.52**	0.62**	0.49*	0.57**	1.00			
Information	0.53*	-0.04	0.35	0.54*	0.38	0.31	-0.02	0.40	1.00		
Function	0.76***	0.42	0.48*	0.49*	0.53*	0.59**	0.34	0.58**	0.29	1.00	
Frequency	-1.14	-0.03	-0.04	0.01	-0.22	0.02	0.17	-0.21	-0.39	-0.26	1.00

*$p < .05$. **$p < .01$. ***$p < .001$.

Multiple Comparisons Looking at Combinations of Factors

In this section, various combinations of factors are studied by visually inspecting charts showing similarities and differences among the schools when grouped in different ways. Figure 4 looks at enrollments. Figure 5 illustrates suspensions. Figure 6 compares days of suspensions. Figure 7 illustrates use of the TIC report. Figure 8 charts behaviors in regular schools with and without TIC reports. Figure 9 charts behaviors in alternative schools with and without TIC reports. Figure 10 charts alternative schools with and without TIC reports. Figure 11 compares regular and alternative schools with and without TIC reports in terms of ODRs. Figure 12 compares average implementation scores on TIC items for alternative and regular schools.
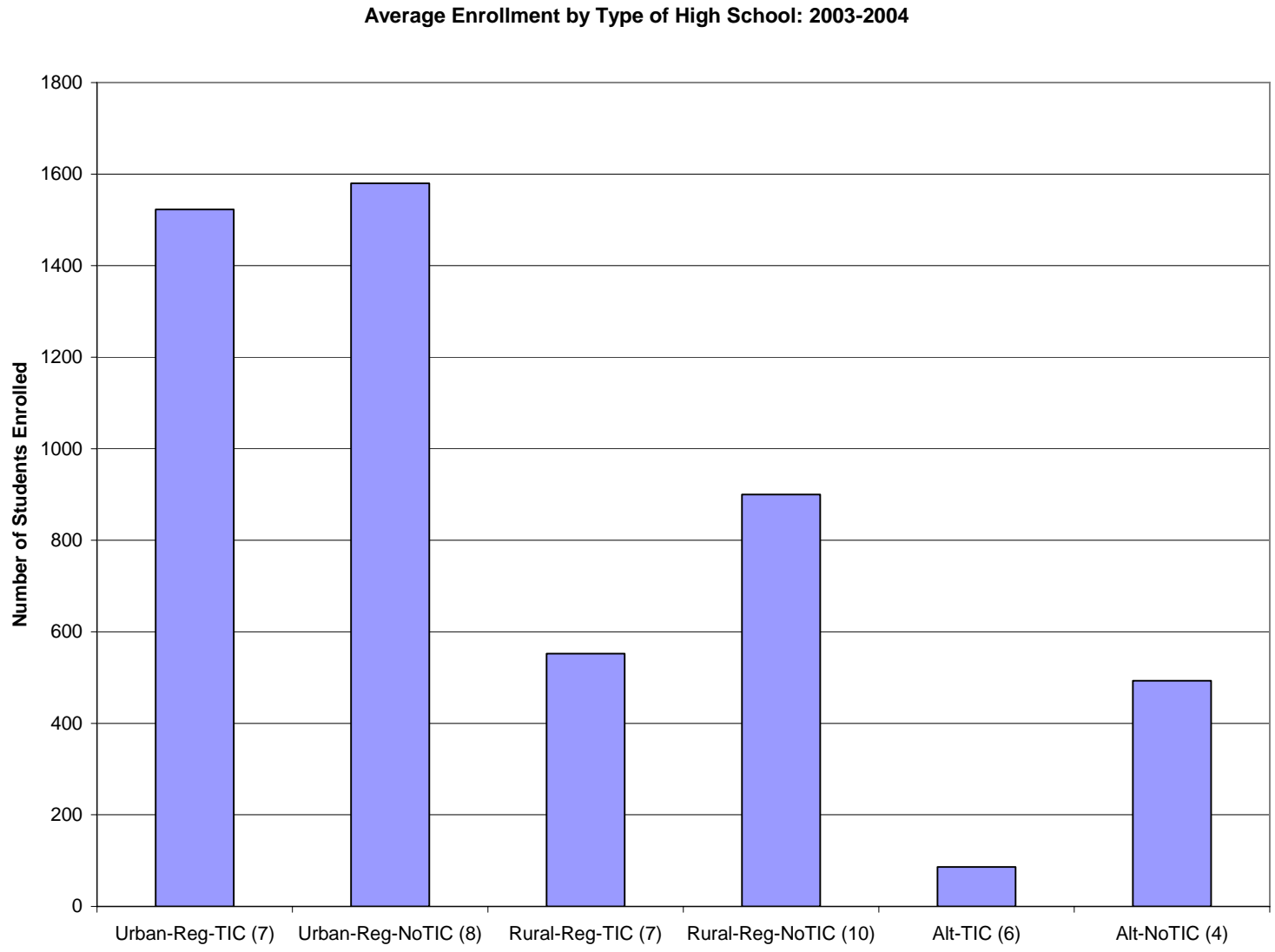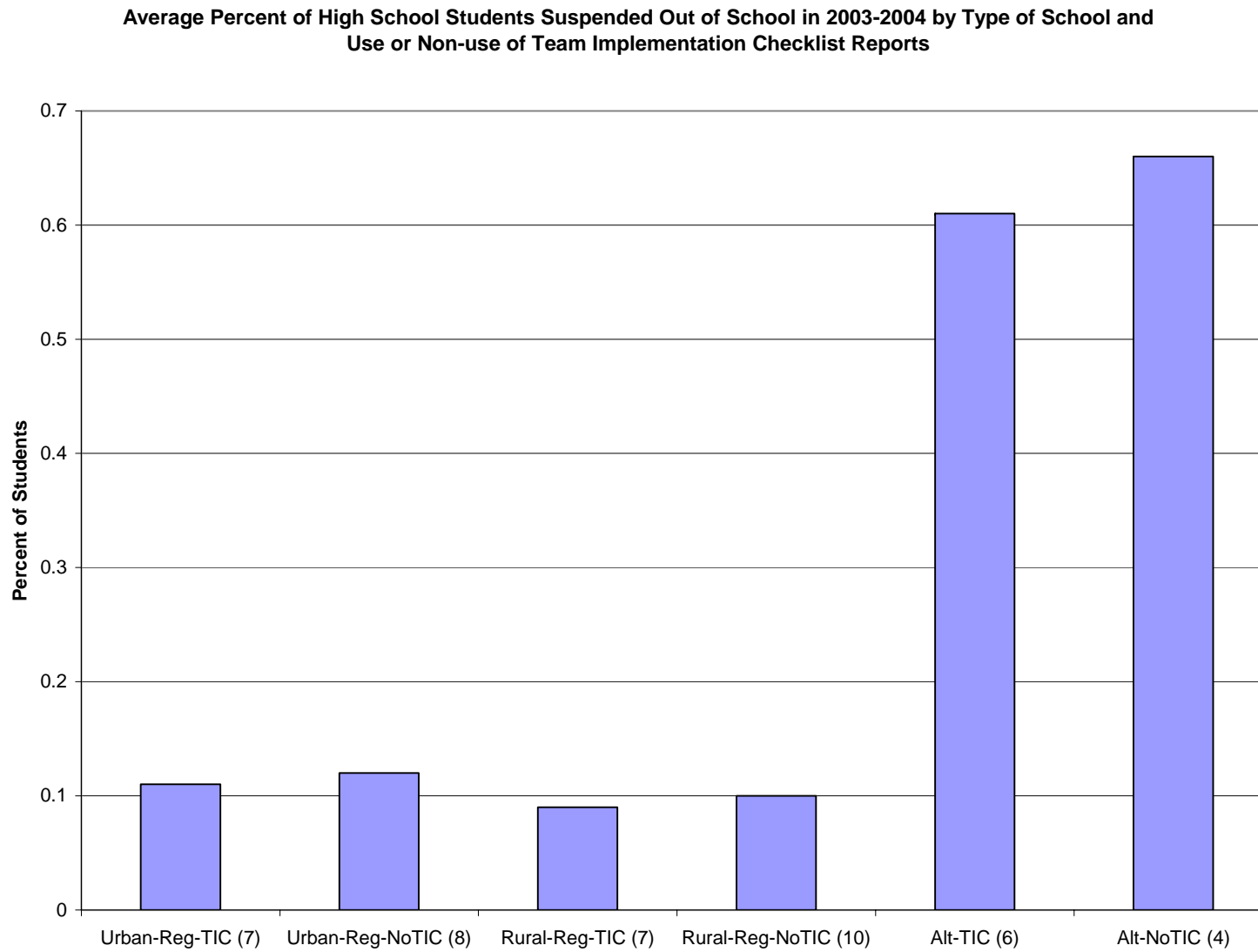
Figure 4. Enrollment

Average Enrollment by Type of High School: 2003-2004

Y-axis: **Number of Students Enrolled** (0 to 1800)

X-axis categories: Urban-Reg-TIC (7), Urban-Reg-NoTIC (8), Rural-Reg-TIC (7), Rural-Reg-NoTIC (10), Alt-TIC (6), Alt-NoTIC (4)

Figure 5. Suspensions

Average Percent of High School Students Suspended Out of School in 2003-2004 by Type of School and Use or Non-use of Team Implementation Checklist Reports

Figure 6. Days of Suspension

Average Number of Days in 2003-2004 of In-School-Suspension (ISS) and Out-of-School Suspension (OSS) by Type of School and Use of Team Implementation Checklist Report
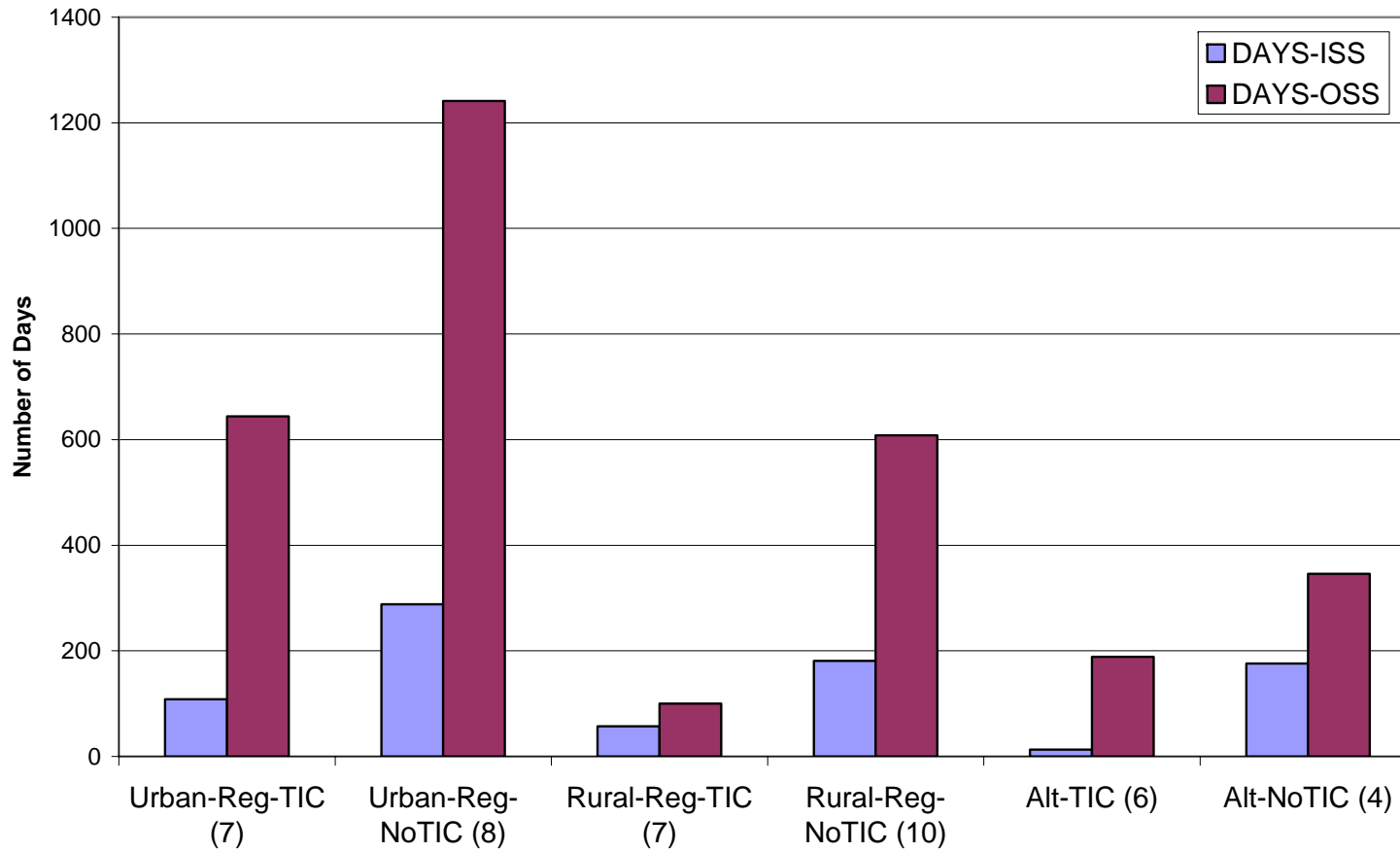
In Each Group of High Schools (Urban, Rural, Alternative) Those Using the TIC Reports Have Relatively Fewer Days of Suspension, on Average, than Schools Not Using the TIC Report

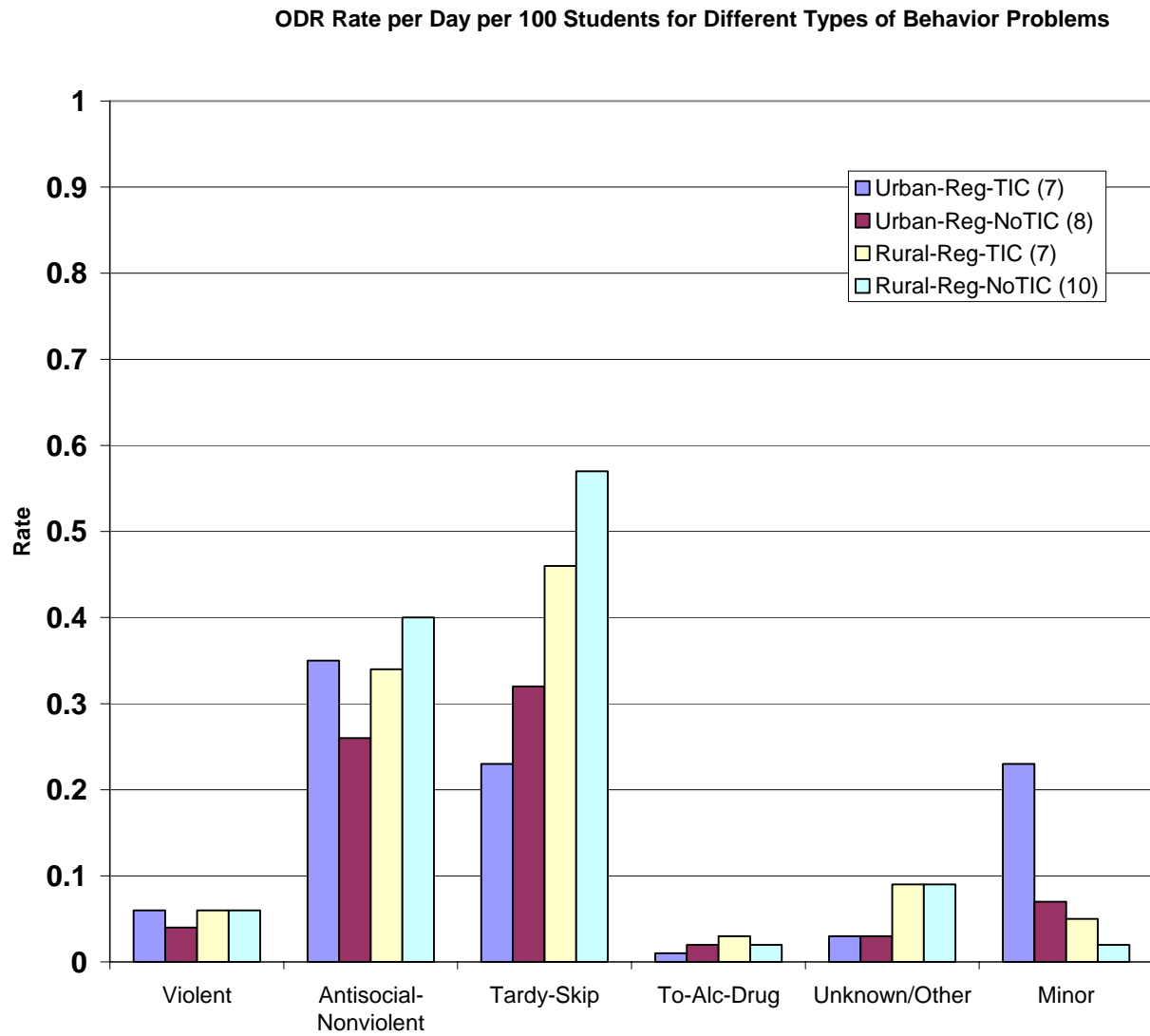Figure 7. Use of TIC

Regular Urban and Rural High Schools: Use of Team Implimentation Checklist (TIC) Reported or Not
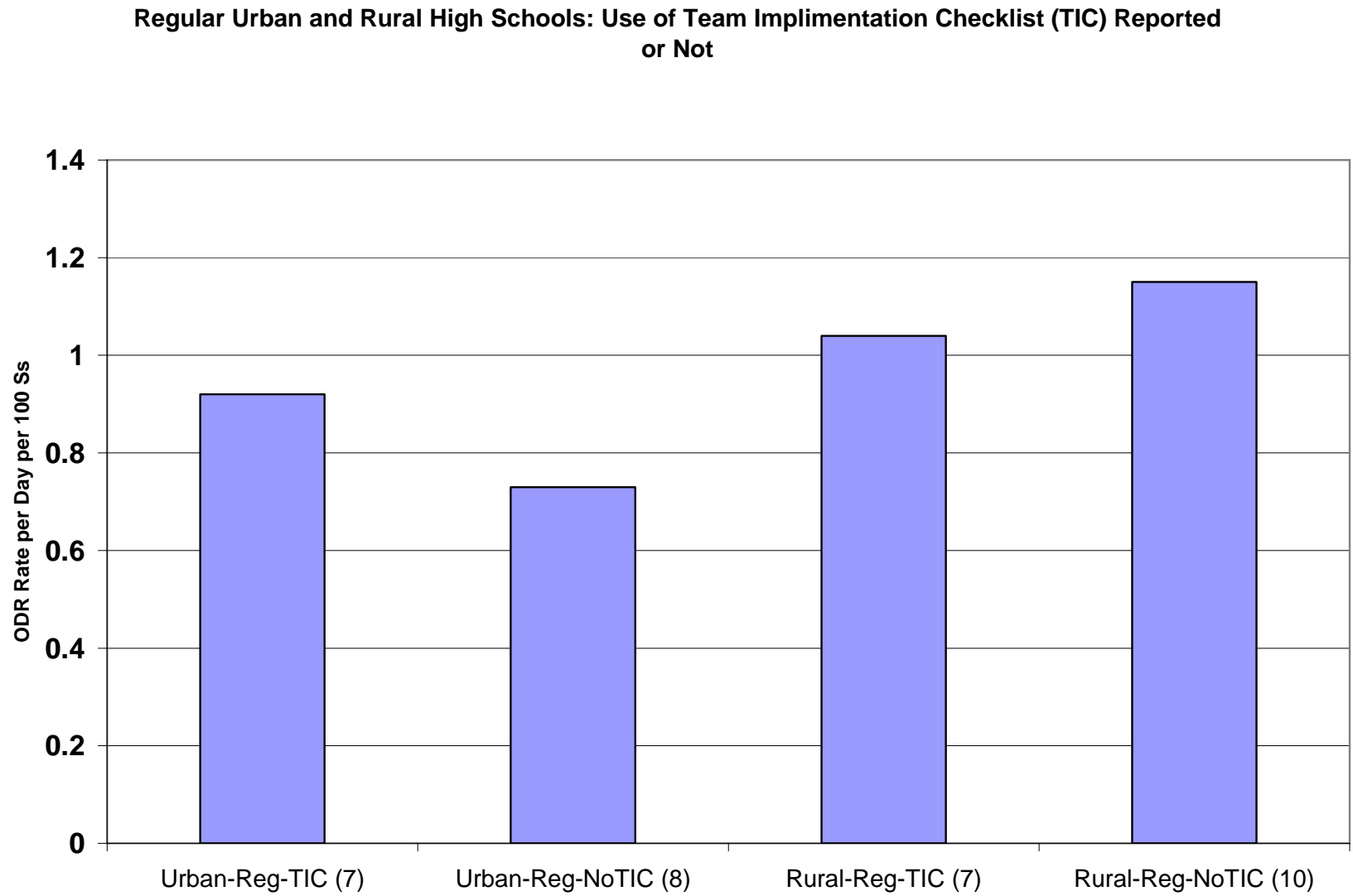
Figure 8. Behavior in Regular Schools and TIC

ODR Rate per Day per 100 Students for Different Types of Behavior Problems

Figure 9. Behavior in Alternative Schools and TIC

ODR Rate per Day per 100 Students for Different Types of Behavior Problems
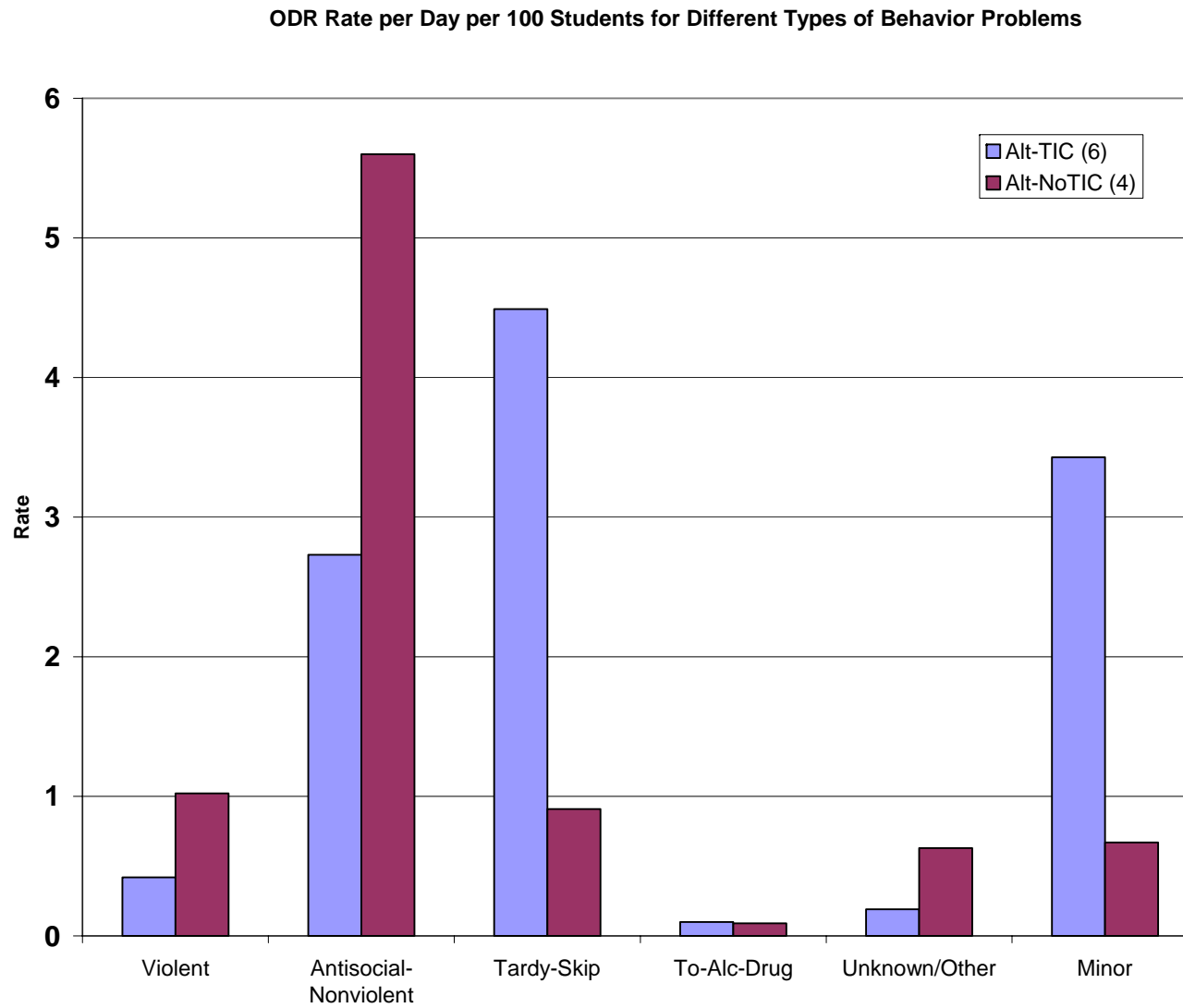
Figure 10. Alternative Schools and TIC

Alternative High Schools: Use of Team Implementation Checklist Reported or Not
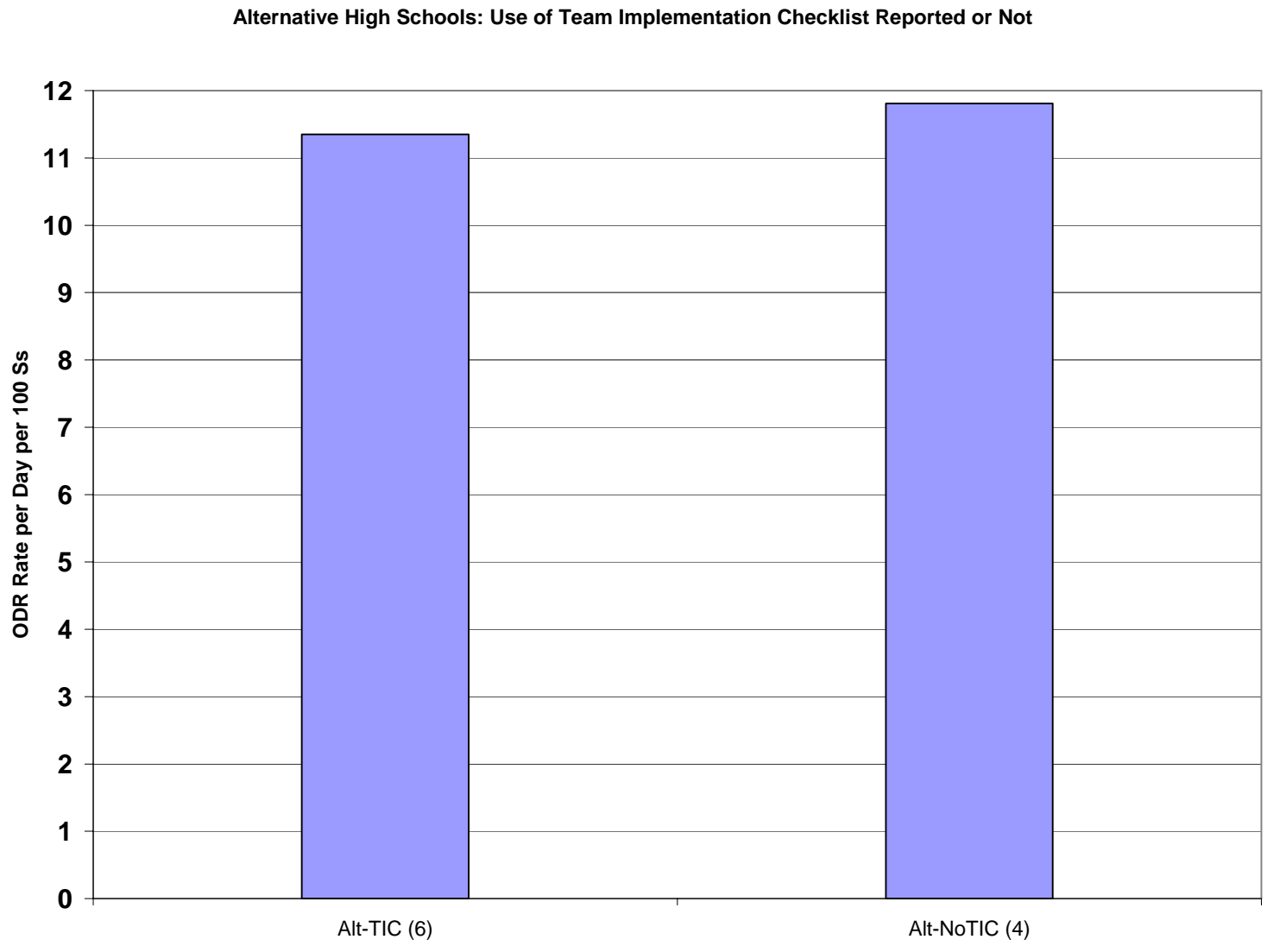
Figure 11. Regular and Alternative Schools and TIC

Office Discipline Referral Rates for Regular and Alternative High Schools Using Team Implementation Checklist Reports or Not in 2004-2004
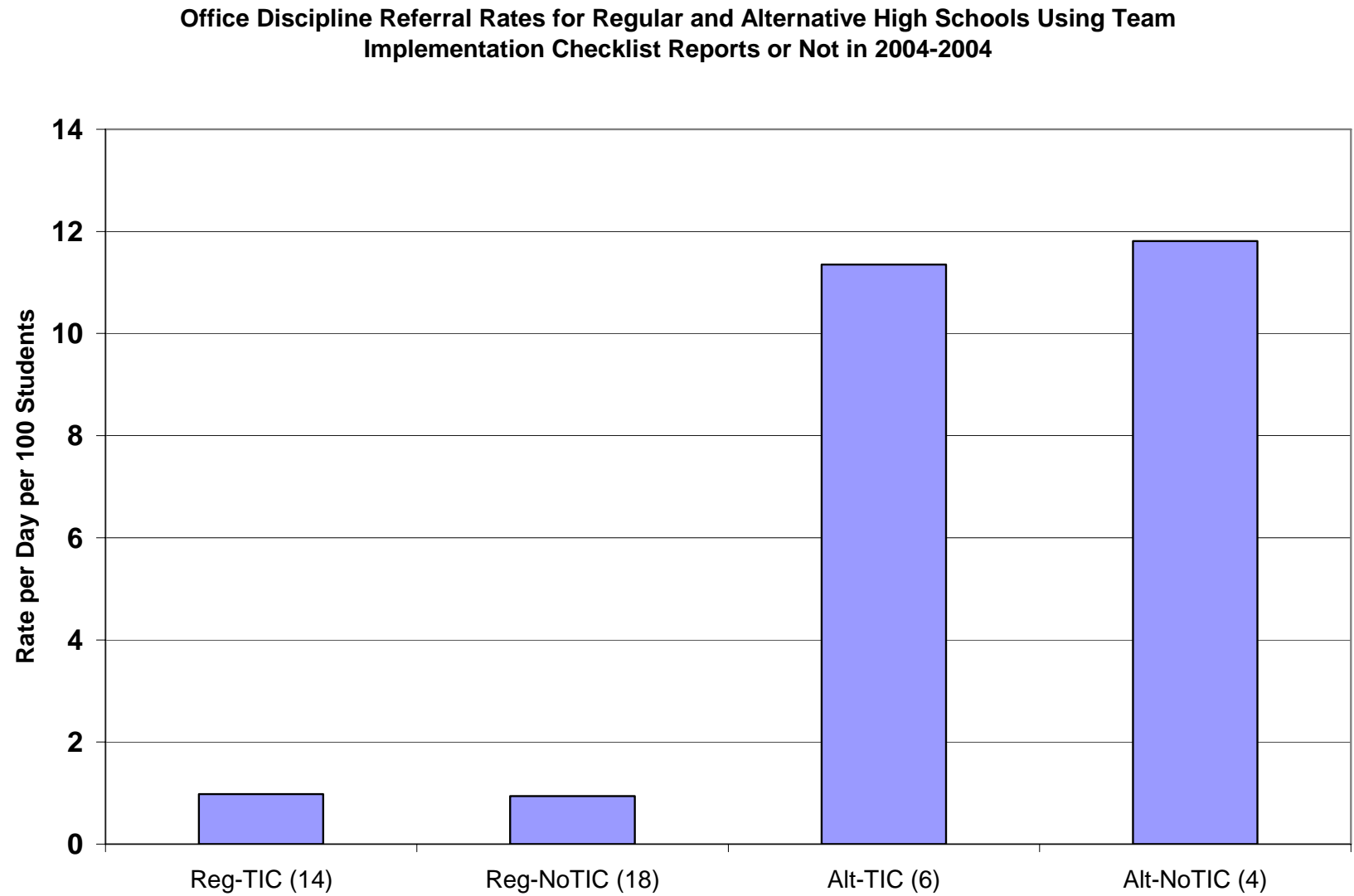
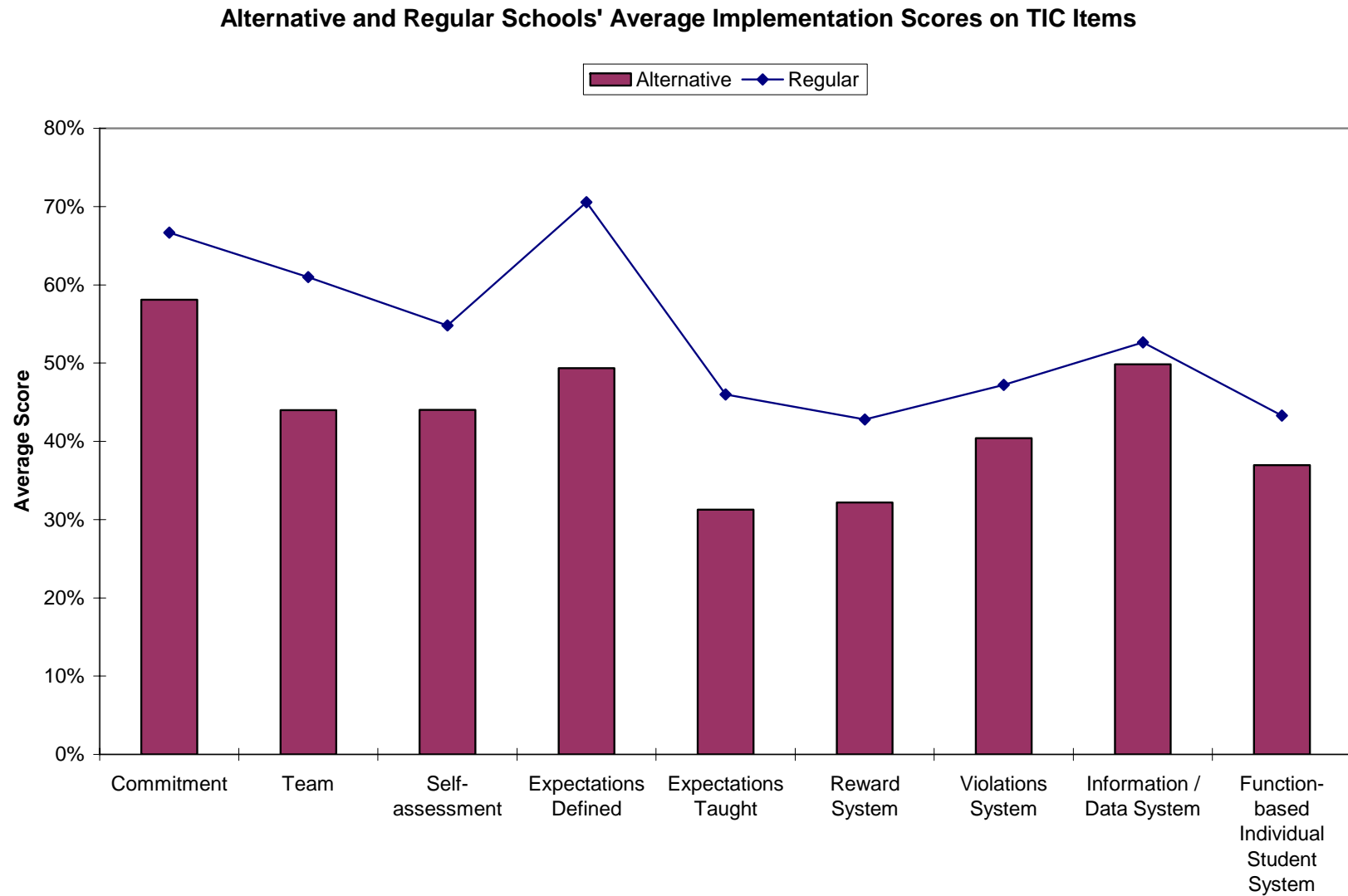Figure 12. Alternative and Regular Schools' Average Implementation Scores on TIC Items.

Alternative and Regular Schools' Average Implementation Scores on TIC Items

Discussion

This analysis indicates that:

- Urban high schools, as well as rural and alternative high schools, are working on implementing Positive Behavior Support.
- High schools are using tools and technology related to school-wide PBS. For example, schools are using Team Implementation Checklist and the School-Wide Information System.
- Alternative high schools are serving students with very high rates of serious problem behaviors yet they are striving to implement PBS.
- High schools are struggling with the management of behavior problems and continue to rely heavily on out of school suspensions.
- Full implementation of all features of school-wide PBS does not seem to happen quickly. Rather, it appears that high schools use an incremental, gradual approach.
- The TIC appears to be a valuable tool for studying on-going implementation efforts. It shows high variability across schools that should be studied further.
- Alternative schools have a pattern of implementation of elements of school-wide PBS that is similar, on average, to the pattern of non-alternative schools, although with lower implementation scores, as indicated on the TIC.

For alternative schools, the top three elements were Commitment, Information / Data Systems, and Expectations Defined. For the Regular schools, the top three elements were Expectations Defined, Commitment, and Team. For the alternative schools, the three items with the lowest implementation scores were Expectations Taught, Reward System, and Function-based Individual Student System. These three elements also had the lowest implementation scores for the "regular" schools. How schools are doing with implementation, however, is not static and schools generally can be expected to improve over time (Doolittle, 2006). The results shown here are from schools early in the process of developing their SWPBS system. The analysis indicates that alternative and "regular" schools tend to approach building their SWPBS systems in basically the same way.

Limitations

Analysis of extant databases using data entered by schools as a part of their own formative evaluation efforts cannot provide answers about cause and effect in the way randomized control group studies can. Schools self-selected into the TIC or the NoTIC group. In looking at relationships among TIC features and ODR patterns, it appears that having a high number of ODRs may be a motivating factor in deciding to form a PBS team and to begin using the TIC. This study looked at one school year, combining data from the whole school year. While comparisons were made among different types of schools, within school changes over time were not studied. In addition, only the first checklist, Start-Up Activity, was studied. Future research should also look at use of Checklist #2, "On-going Activity Monitoring." Although the total number of students involved was very large, more than 38,000, schools were the unit of analysis and the total number of schools was 42. While that is a fairly large sample of schools, for statistical purposes, especially when subdivided into groups, power for statistical analysis is

limited. Although the range of types and locations was fairly wide, no inner city schools were included.

Answers to Research Questions

1. How do regular and alternative high schools differ in ODR patterns? Alternative schools have much greater discipline problems, both in type and quantity.

2. Do regular high schools in urban and rural areas face similar types of behavior problems? In this study, location did not seem to be an outstanding factor. Individual variations were more noticeable.

3. How do the features of the TIC correlate with each other? With the exception of "Commitment," most of the TIC features are statistically significantly ($p < .05$), positively correlated, usually in the moderately to high range.

4. Is frequent use of the TIC report related to high scores indicating that PBS features are being implemented? Not in this study. It should be noted that the developers of the TIC recommend that it be used quarterly. The schools in this study varied from 0 to 10 times per year. More frequent use was not related to better scores in a linear fashion.

5. Are schools using the TIC report similar to schools that do not use the TIC report? In this study, the schools were more similar than different. It is possible that some of the schools in the NoTIC group were using the Team Implementation Checklist but not reporting it electronically. In addition, change over time was not studied. Future efforts to study the impact of using the TIC would benefit from observing changes over several years and combining a study of the extant database with interviews or questionnaires to obtain information about implementation factors and school climate issues that are not recorded electronically.

6. What are the types of behavior problems that schools are dealing with and how are the different types correlated? Violent and antisocial nonviolent behavior problems were highly correlated. Schools varied considerably in the different types of behavior problems of concern. For example, some schools had extremely high numbers of ODRs for "Tardy and Skipping" but very few for violent behaviors. Others had the opposite pattern. An advantage of having schools chart and study their own ODR data in PBS team meetings is that this type of formative, internal evaluation empowers school staff to develop interventions and action plans that fit their unique needs.

7. How many days of in-school and out-of-school suspension are typical for different types of high schools? For regular high schools, the average number of days of in-school suspension for the 2003-2004 school year was 165 but for out-of-school suspensions, it was 663. For alternative schools (typically with much smaller enrollments), the average number of days of in-school suspension was 78 and of out-of-school suspension, 252.

8. What percentages of enrolled high school students, on average, are suspended from schools? In regular schools, 10%. In alternative schools, 63% of the students are suspended, on average, if

calculated by dividing the number of students suspended out by the enrollment. However, enrollment data in extant databases typically is based on October data and does not reflect changes that may occur during the year. For example, in some alternative schools, students frequently come and go. By the end of the school year, the total number of students served may be much greater than the enrollment in October.

9. Does the TIC appear to be useful (a) a research tool for studying PBS implementation in high schools and (b) as a resource for schools in addressing disciplinary concerns? As a research tool, the generally moderate to high correlations among the items indicates that the TIC is a coherent measure. In addition, compared to other SW-PBS measures, the TIC, in its user-friendly web-based format, appears to be very practical for repeated use in applied settings and for going to scale. The fact that many schools were using the TIC, and often frequently, indicates that high school educators find it helpful.

10. Based on ODR data patterns and TIC reports, do alternative schools appear to be the solution to the dilemma schools are facing when trying to maintain orderly and safe schools while providing positive behavior support to students at risk for school failure or exclusion due to behavioral issues? Additional research is needed. The extremely high ODR and suspension rates in the alternative schools, particularly for violent behaviors and for potentially addictive behaviors, suggests, first, that if these students remained in the regular schools instead of having the option to attend an alternative school, it would be difficult for the regular school to support the students. On the other hand, it also indicates that even the alternative schools find it difficult to support these students. It is interesting that educators in alternative schools are making an effort to implement SW-PBS and to use the TIC.

11. Do regular and alternative high schools, on average, differ in the way they are implementing PBS, as indicated on in their TIC reports? Regular schools had slightly higher implementation scores yet alternative and regular schools were similar in terms of which elements of PBS had high or low implementation scores.

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