

Burrell Behavioral Health

## Introduction

Recent years have seen an explosion of violence in schools, resulting in the injury or death of many. Although the responses to this public health crisis have been many and varied, many have been focused on what might be termed "safety from without" or external safety measures such as installation of metal detectors and surveillance cameras, or the addition of law enforcement officers to school campuses. These responses are reasonable reactions to perceived threats, but they are likely to miss the mark in that they do not address the need for "safety from within" or prevention efforts targeting the social, emotional, and behavioral problems that are very often precursors to school attacks.

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The need is great—at least 10% of youth will experience a serious emotional disturbance severe enough to impair their functioning, yet only about 1 in 5 of these youth will receive any kind of treatment, yielding a situation where "unmet need for services remains as high now as it was 20 years ago" (U.S. Public Health Service, 2000). Research has shown that *every attacker had engaged in behavior before the shooting that seriously concerned at least one adult - and for many had concerned three or more different adults*" The clear implications of this study are that many school attacks are preventable events and that prevention efforts must involve students, parents, and school personnel at multiple systems of care.

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## Program Description

A Safe Schools Healthy Students collaboration between Burrell Behavioral Health and Springfield Public Schools in Springfield, Missouri community, formed a partnership to provide the "safety from within" through the provision of preventative, responsive mental health services in district middle and high schools. Specifically, for three years now, 17 masters level School-Based Clinicians (SBCs) and six School-Based Case Managers (SBCMs) have provided mental health and behavioral consultation to teachers, administrators and school counselors.

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## Program Aims

- Provides mental health and behavioral consultation to teachers, administrators and school counselors
- Provide individual therapy, family therapy, group therapy, crisis intervention, psychological assessments, home visits, case management and after-school services to students
- The intervention is designed to circumvent some of the often identified barriers to getting students into mental health services such as difficult access, complicated referral mechanisms, long wait times for appointments, lack of adequate transportation, and financial barriers.

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## Participants

- At-risk students in seven middle schools, four high schools, and three alternative school programs in the Springfield school district.
- Since the spring of 2004 over 7738 students have received services
- Students demographics:
  - (1) 57% high school and 43% middle school
  - (2) 49% males and 51% females;
  - (3) 84% Caucasian, 10% African-American, 3% Hispanic,
  - 51% full fee lunch, 49% free/reduced lunch, as an indicator of economic disadvantage among the students served.

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## Instruments

Students receiving individual or group therapy were asked to complete the Ohio Scales at the start of and completion of services (Ohio Scales, Ogles, et al., 1999). The Ohio scales a 44-item instrument was used to collect pretest-posttest outcome data assessing problem severity, functioning, life satisfaction, and satisfaction with services. To date a 175 students have complete pretest and posttest data available for analysis.

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## School Data Measures

In addition, the following data were collected for each student receiving services: attendance (unexcused and excused absences), discipline referrals (fighting, conduct, etc.), disciplinary action (in-school suspensions or ISS, and out-of-school suspensions or OSS), and academic data. In order to assess extensiveness of services delivered, level of service was stratified by number of sessions resulting in low (1-3), medium (4-7), high (8-12), and intense (>12) categories.

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## Research Design and Analysis

A non-control pretest-posttest design was employed in which students were broken into one of eight cohorts based on the quarter in which they began services. The nature of the services provided and the population to whom they are provided preclude the use of a control group (i.e., it would violate school policies and treatment protocols to assign a student in need to a control condition). Initial program data have been analyzed with a series of paired-sample t-tests.

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## Results

- Results were compared from the quarter prior to initiation of services through the quarter following service initiation
- Decrease in conduct referrals ( $t(722)=5.661, p<.001$ )
- Decrease in drug and alcohol related offenses ( $t(117)=3.168, p=.002$ )
- Decrease in probation/conferences ( $t(375)=4.42, p<.001$ )
- Decrease in total offenses ( $t(1377)=3.49, p<.001$ ), and excused absences ( $t(2614)=-8.013, p<.001$ )

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## Results

Results indicate that students receiving services showed significant reductions (i.e., from the quarter prior to initiation of services through the quarter following initiation of services) in conduct-related referrals ( $t(722)=5.661, p<.001$ ), a decrease in drug and alcohol related offenses ( $t(117)=3.168, p=.002$ ), probation and conferences ( $t(375)=4.42, p<.001$ ), total offenses ( $t(1377)=3.49, p<.001$ ), and excused absences ( $t(2614)=-8.013, p<.001$ ). There was a significant *increase* in bus and administrative referrals ( $t(503)=-3.19, p=.001$ ) and ISS ( $t(868)=-2.31, p=.021$ ).

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## Ohio Results

Improvements from the Ohio Scales indicate significant psychological, social, and interpersonal improvements among students receiving individual therapy. Students receiving individual therapy showed both clinical and statistically significant improvements in problem severity ( $t(125)= 7.71, p<.001$ ), hopefulness ( $t(125)=5.378, p<.001$ ), and functioning ( $t(125)=-6.376, p<.001$ ).

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## Problem Severity

- Arguing the most common behavior at program entry dropped by 28% between pre- and posttest.
- **There were reductions in all behaviors over time** and all differences were statistically significant.
- The youth also reported large reductions in a sense of worthlessness over the course of the time they were in the program.

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## Functioning

- The most significant functional issues at pre-test related mainly to the emotional state of the youth. Most were having difficulty controlling emotions, motivation, concentrating, completing tasks, and feeling good about themselves.
- **All areas improved significantly** from pre-test to posttest. The most significant changes were in the areas of motivation, skill building, and school performance.
- At the time of the posttest, however, large majorities of youth still had significant functioning issues. Continued intervention with these youth to explore emotional issues and possible family dysfunction that might account for these functioning issues.

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## Conclusions

It is possible that unknown and/or uncontrolled factors influenced the results of this study. The mental health team works in 17 different schools, each with its own climate, procedures, staff, and student population, and the type and number of hours each participant spent in SBS varied substantially. Further, the lack of a control group leaves open questions of historical factors and regression to the mean as partial explanations for the positive results.

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Still, even in the context of such limitations, this study clearly shows that those students receiving SBS experienced dramatic changes in risk factors for alcohol, tobacco, drugs, and violence in schools, with significant reductions in total discipline referrals (18%), violations regarding drugs, alcohol, and tobacco (48%), and the number of referrals for disorderly conduct, defiance, and disrespect (17%). These results, in tandem with substantial improvements in psychosocial functioning (less impulsivity, better relationships, more control of emotions, etc.) provide significant evidence that SBS are contributing to achieving the goal of "safety from within" for the Springfield school system.

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## References

- Ogles, B., Melendez, G., Davis, D., and Lunnen, K. (1999). The Ohio Youth Problems, Functioning, and Satisfaction Scales (Short Form) User's Manual. Ohio University and Southern Consortium for Children.
- U.S. Public Health Service, Report of the Surgeon General's Conference on Children's Mental Health: A National Action Agenda. Washington, DC: Department of Health and Human Services, 2000.

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20th Annual RTC Conference  
Presented in Tampa, March 2007

**An Evaluative Study of the Impact of School-Based Mental Health Services on  
Student Behavior, Psychosocial Functioning, and other Risk Factors**

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## Introduction

Recent years have seen an explosion of violence in American schools, resulting in the injury or death of many. Although the responses to this public health crisis have been many and varied, many have been focused on what might be termed “safety from without” or external safety measures such as installation of metal detectors and surveillance cameras, or the addition of security guards and law enforcement officers to school campuses. These responses are reasonable reactions to perceived threats, but they are likely to miss the mark in that they do not address the need for “safety from within” or prevention efforts targeting the social, emotional, and behavioral problems that are very often precursors to school attacks. The need is great—at least 10% of youth will experience a serious emotional disturbance severe enough to impair their functioning, yet only about 1 in 5 of these youth will receive any kind of treatment, yielding a situation where “unmet need for services remains as high now as it was 20 years ago” (U.S. Public Health Service, 2000). Each youth left untreated has the potential for decline in their functioning, increasing the likelihood of isolation, suicide, substance abuse, and violent acting out.

The U.S. Secret Service (Vossekuil, et al., 2002), in concert with the U.S. Department of Education, conducted perhaps the most extensive study of school shootings and other school-based attacks to date, examining school shootings as far back as 1974, involving 41 student attackers (the study included interviews with 10 school shooters). In summary, “the study found that school shootings are rarely impulsive acts. Rather, they are typically thought out and planned out in advance. In addition, prior to most shootings other kids knew the shooting was to occur - but did not

alert an adult. The study findings also revealed that there is no ‘profile’ of a school shooter; instead, the students who carried out the attacks differed from one another in numerous ways. *However, almost every attacker had engaged in behavior before the shooting that seriously concerned at least one adult - and for many had concerned three or more different adults*” (italics added for emphasis). The clear implications of this study are that many school attacks are preventable events and that prevention efforts must involve students, parents, and school personnel at multiple levels—including establishment of systems for recognizing and responding to the troublesome behaviors that are near universal precursors to school attacks.

An example of this approach is found in the response of the Springfield, Missouri community, where a partnership between the public schools and the area community mental health center has directly addressed the concept of “safety from within” through the provision of preventative, responsive mental health services in district middle and high schools. This collaborative project to provide school-based services (SBS) was designed to circumvent some of the often identified barriers to getting students into mental health services such as difficult access, complicated referral mechanisms, long wait times for appointments, lack of adequate transportation, and financial barriers. In this system, teachers, who are often the first to identify students with significant behavioral or emotional problems, have an immediately accessible resource available to them. Specifically, for three years now, 17 masters level School-Based Clinicians (SBCs) and six School-Based Case Managers (SBCMs) have provided mental health and behavioral consultation to teachers, administrators and school counselors, as well as providing individual therapy, family therapy, group therapy, crisis intervention,

psychological assessments, home visits, case management and after-school services to several thousand students in the 25,000 student Springfield public school system.

This evaluative study seeks to answer the following research question: What are the behavioral, academic, and psychosocial outcomes of at-risk students who have been provided services through SBCs and SBCMs?

## **Method**

### *Participants*

The program provides services in seven middle schools, four high schools, and three alternative school programs in the Springfield school district. At-risk students are identified by school personnel and referred to SBCs and SBCMs for services. Since the program began in spring of 2004 over 7738 students have received services under the program. Students receiving services in the program can be characterized as follows: (1) 57% high school students and 43% middle school students; (2) 49% males and 51% females; (3) 84% Caucasian, 10% African-American, 3% Hispanic, 1% Asian, and 1% American Indian; and (4) 51% full fee lunch, 49% free/reduced lunch, as an indicator of economic disadvantage among the students served.

### *Instruments*

Changes in student mental health (student behaviors, problem severity, functioning, life satisfaction, and satisfaction with services) were assessed through the 44-item Ohio Youth Problems, Functioning, and Satisfaction Scales (Ohio Scales, Ogles, et al., 1999). The Ohio Scales were administered only to those students who received individual or family therapy. In addition, the following data were collected for each student receiving services: attendance (unexcused and excused absences),

discipline referrals (fighting, conduct, etc.), disciplinary action (in-school suspensions or ISS, and out-of-school suspensions or OSS), and academic data (GPA on a 4-point scale). In order to assess extensiveness of services delivered, level of service was stratified by number of sessions resulting in low (1-3), medium (4-7), high (8-12), and intense (>12) categories.

### *Design and Analysis*

A non-control pretest-posttest design was employed in which students were broken into cohorts based on the quarter in which they began services. The nature of the services provided and the population to whom they are provided preclude the use of a control group (i.e., it would violate school policies and treatment protocols to assign a student in need to a control condition). Initial program data have been analyzed with a series of paired-sample t-tests.

### **Results**

Results indicate that students receiving services through the program showed significant reductions (i.e., from the quarter prior to initiation of services through the quarter following initiation of services) in conduct-related referrals ( $t(722)=5.661$ ,  $p<.001$ ), a decrease in drug and alcohol related offenses ( $t(117)=3.168$ ,  $p=.002$ ), probation and conferences ( $t(375)=4.42$ ,  $p<.001$ ), total offenses ( $t(1377)=3.49$ ,  $p<.001$ ), and excused absences ( $t(2614)=-8.013$ ,  $p<.001$ ). There was a significant *increase* in bus and administrative referrals ( $t(503)=-3.19$ ,  $p=.001$ ) and ISS ( $t(868)=-2.31$ ,  $p=.021$ ). The results for all discipline referrals and disciplinary actions are listed in Table 2. In addition to improvements in the domains described above, results from the Ohio Scales indicate significant psychological, social, and interpersonal improvements among students



receiving individual therapy. Students receiving individual therapy showed both clinical and statistically significant improvements in problem severity ( $t(125)= 7.71, p<.001$ ), hopefulness ( $t(125)=5.378, p<.001$ ), and functioning ( $t(125)=-6.376, p<.001$ ). More specifically, these findings translate in to significant decreases in arguing, fighting and yelling, self-harm, impulsivity, and depression, as well as improved functioning in the areas of getting along with family, friends and others, controlling emotions and staying out of trouble, concentrating, paying attention, finishing tasks, and accepting responsibility for actions.

Table 2. Disciplinary Referrals and Actions, and Academic Performance

Indicator	N	Pre-mean	Post-mean	SD	t-test value	p-value	Change Percentage
Attendance	439	1.0	.96	1.50-1.16	.408	.684	-4%
Bus/ Admin	504	.81	1.06	1.01-1.15	-3.19	.001	30.86%
Detention	272	1.18	.96	1.83-1.28	1.565	.119	-18.64%
Disorderly Conduct	723	3.1	1.93	4.54-2.87	5.66	.000	-37.74%
Drugs/Alcohol	118	.89	.46	.932-.735	3.168	.002	-48.31%
Fighting	501	.96	1.00	1.19-1.26	-.430	.667	4%
Excused absence	2615	5.03	6.35	6.12-7.52	-8.013	.000	26.24%
Unexcused absence	1752	3.76	3.93	5.41-5.47	-.065	.948	1.40%
GPA	1609	2.14	2.16	1.10-1.10	-1.078	.281	.93%
ISS	869	1.09	1.25	1.34-1.37	-2.31	.021	14.67%
OSS	536	1.06	1.01	1.29-1.24	.565	.572	n/c
Probation	376	.98	.62	1.17-.721	4.42	.000	-36.73%
Total	1378	2.91	2.39	4.95-3.40	3.49	.000	-17.86%

## **Conclusions**

It is possible that unknown and/or uncontrolled factors influenced the results of this study. The mental health team works in 17 different schools, each with its own climate, procedures, staff, and student population, and the type and number of hours each participant spent in SBS varied substantially. Further, the lack of a control group leaves open questions of historical factors and regression to the mean as partial explanations for the positive results. Still, even in the context of such limitations, this study clearly shows that those students receiving SBS experienced dramatic changes in risk factors for alcohol, tobacco, drugs, and violence in schools, with significant reductions in total discipline referrals (18%), violations regarding drugs, alcohol, and tobacco (48%), and the number of referrals for disorderly conduct, defiance, and disrespect (17%). These results, in tandem with substantial improvements in psychosocial functioning (less impulsivity, better relationships, more control of emotions, etc.) provide significant evidence that SBS are contributing to achieving the goal of “safety from within” for the Springfield school system.

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