

Solidarity as a Protective Factor in the Aftermath

Russell T. Jones, Ph.D.
Professor of Psychology
Virginia Tech

**Aftermath Dynamics and Management: Through the
Lens of the Virginia Tech Incident**
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Disaster Technical Assistance Center (DTAC)

When disasters strike, service providers are suddenly thrust onto the frontline for response and recovery efforts... often they find themselves confronting new or unknown problems for which no amount of preplanning is possible.

Initial Steps Toward Solidarity

1. PROMOTION OF SENSE OF SAFETY
2. PROMOTION OF CALMING
3. PROMOTION OF SENSE OF SELF-EFFICACY AND COLLECTIVE EFFICACY
4. PROMOTION OF CONNECTEDNESS
5. INSTILLING HOPE

Hobfoll, S. E. Five Essential Elements of Immediate and Mid-term Mass Trauma Interventions: Empirical Evidence. *Psychiatry*, 70, 4 Winter 2007.

Purpose

- The purpose of the study
 - To estimate the extent of exposure and psychological reactions
 - To estimate need for psychological services

Survey

- Two surveys initiated by the Virginia Tech Center for Survey Results on July 10 and August 19, 2007
- Respondents were asked to respond to questions about
 - A) their exposure to the events on April 16
 - B) their mental health before and after April 16
 - C) their trauma reactions and grief experiences due to April 16
 - D) their use of therapy and counseling before and after April 16

Survey

- Nearly 5,000 students and 1,700 faculty and staff completed the survey
- Response rates were approximately 20% for students and for faculty and staff

STUDENTS

Exposure

Odds-ratios with exposure to shooting-related stressors, with controls for gender, age, race/ethnicity

	PTSD	SMI	SMI OR MMI	Any Disorder
First Incident at Ambler-Johnston				
Awareness ¹				
Close Proximity ²	1.7 (1.2-2.3)		1.6 (1.1-2.2)	1.9 (1.4-2.5)
Trauma ³	3.9 (2.4-6.1)	3.7 (1.9-7.2)	2.3 (1.5-3.6)	2.9 (1.9-4.4)
Second Incident at Norris Hall				
Awareness				
Close Proximity				
Trauma	3.2 (1.9-5.3)	2.8 (1.3-6.0)	2.3 (1.5-3.8)	2.7 (1.8-4.3)
Indirect Exposure				
Could Not Contact Friends	2.5 (2.0-3.1)	1.5 (1.1-2.2)	1.4 (1.2-1.7)	1.7 (1.4-2.1)
Should/Could Have Been in Norris	1.5 (1.1-1.9)			

¹Being aware of police presence, learning about what happened, hearing campus announcements, and being in locked building

²Those who were in a building where a shooting took place, in a nearby building, or were close enough to hear the shots

³Exposure to persons injured or killed, seeing people running in panic, seeing activities of the SWAT teams, seeing medics treating injured people, and having been injured.

Exposure

Odds-ratios with loss events by closeness to those killed, injured, or escaped uninjured, with controls for gender, age, race/ethnicity

	PTSD	SMI	SMI or MMI	Any Disorder
Knew someone who was killed				
Someone close (significant other or close friend)	3.6 (2.7-4.8)	2.7 (2.0-4.4)	2.4 (1.8-3.1)	2.7 (2.1-3.5)
Someone less close (friend or acquaintance)	1.9 (1.5-4.9)	1.7 (1.2-2.5)	1.4 (1.2-1.7)	1.6 (1.3-1.9)
Someone distant				
Knew someone who was injured				
Someone close (significant other or close friend)	2.6 (1.9-3.7)	1.9 (1.2-3.1)	1.8 (1.3-2.5)	1.9 (1.4-2.6)
Someone less close (friend or acquaintance)	1.4 (1.2-1.7)			1.2 (1.0-1.4)
Someone distant	1.3 (1.1-1.6)			
Knew someone who escaped uninjured				
Someone close (significant other or close friend)	1.7 (1.3-2.3)		1.3 (1.0-1.8)	1.4 (1.1-1.9)
Someone less close (friend or acquaintance)				
Someone distant				

Estimated Prevalence of Mental Disorders

	All Students	Female Students	Male Students
	Percent (95% CI)	Percent (95% CI)	Percent (95% CI)
PTSD	15.4 (14.2-16.6)	23.2 (21.3-25.1)	9.9 (8.4-11.5)
SMI	4.7 (4.0-5.3)	6.8 (5.6-7.9)	3.1 (2.3-4.0)
MMI	14.3 (13.1-15.5)	18.5 (16.7-20.2)	11.3 (9.7-12.9)
Any Disorder	25.2 (23.7-26.7)	34.2 (32.0-36.3)	18.9 (16.9-20.9)

Odds-ratios by socio-demographic variables

	PTSD or (95% CI)	SMI or (95% CI)	SMI or MMI or (95% CI)	Any Disorder or (95% CI)
AGE				
18				
19				
20	1.4 (1.1-1.9)			1.3 (1.1-1.6)
21				
22+				
GENDER				
Male				
Female	2.7 (2.2-3.3)	2.2 (1.6-3.1)	2.0 (1.7-2.4)	2.2 (1.9-2.6)
RACE/ETHNICITY				
White				
Black				
Hispanic				
Asian		1.7 (1.0-2.9)	1.6 (1.1-2.1)	
Other				
YEAR				
Freshman				1.4 (1.0-1.8)
Sophomore	1.5 (1.1-2.1)			1.5 (1.1-1.9)
Junior	1.6 (1.2-2.2)			1.4 (1.1-1.9)
Senior				
Graduate				

Findings and Implications: Counseling Following the Shooting

- 10% (434) received some type of therapy or professional counseling
 - Majority received from MH professional
 - 16% (69) received from primary care doctor
 - 19% (83) received from religious counselor

Findings and Implications: Counseling Following the Shooting

- Of those in therapy or counseling after the shootings
 - 28% (118) were already in counseling or therapy before the shootings
 - 57% (242) started after the shootings

Findings and Implications: Counseling Following the Shooting

- The vast majority had less than 10 sessions
- Almost 90% had five or fewer sessions

Findings and Implications: Planning Considerations

1. Address gaps between available counseling and actual needs of students
2. Need to broaden pool of trauma professionals trained in evidence-based interventions
3. Need for training programs for trauma professionals in VT community to reflect cultural diversity of VT students served

FACULTY/STAFF

Exposure

Odds-ratios with controls for gender, age, race/ethnicity

	PTSD	SMI	Either Disorder
First Incident at Ambler-Johnston			
Awareness		3.4 (1.4-8.0)	1.9 (1.1-3.1)
Exposure	2.3 (1.1- 4.6)		2.2 (1.4-4.4)
Trauma	6.3 (3.1-13.0)	8.7 (3.3-23.3)	6.8 (3.4-13.5)
Second Incident at Norris Hall			
Awareness			
Exposure	2.4 (1.6-3.6)		1.3 (1.2-1.5)
Trauma	8.7 (4.0-18.6)		2.2 (1.5-3.2)
Indirect Exposure			
Could Not Contact Friends	2.3 (1.7-3.3)		2.2 (1.6-3.1)
Should/ Could Have Been in Norris	2.6 (1.6-4.2)		2.6 (1.6-4.0)

Exposure

Odds-ratios by closeness to those killed, injured, or escaped uninjured,
with controls for gender, age, race/ethnicity

	PTSD	SMI	Either Disorder
Knew someone who was killed			
Someone close (significant other or close friend)	2.9 (1.3-6.5)	3.2 (1.1-6.5)	2.5 (1.1-5.6)
Someone less close (friend or acquaintance)	1.8 (1.3-2.5)		1.7 (1.2-2.3)
Someone distant			1.6 (1.1-2.3)
Knew someone who was injured			
Someone close (significant other or close friend)			
Someone less close (friend or acquaintance)	1.9 (1.3-2.9)		1.7 (1.1-2.4)
Someone distant	1.5 (1.1-2.1)		1.5 (1.1-2.0)
Knew someone who escaped uninjured			
Someone close (significant other or close friend)			
Someone less close (friend or acquaintance)			
Someone distant			

Estimated Prevalence of Mental Disorders

	Faculty/Staff Percent (95% CI)
SMI	4.0 (3.0-4.9)
PTSD	9.6 (8.2-11.1)
Either Disorder	11.0 (9.5-12.5)

Odds-ratios by socio-demographic variables

	PTSD	SMI	Either Disorder
AGE	Not Significant	Not Significant	Not Significant
17-30			
31-40			
41-50			
51-60			
61+			
Gender			
Male			
Female	2.5 (1.7-3.7)	1.8 (1.1-3.2)	2.4 (1.7-3.5)
Race/Ethnicity			
White			
Black	2.6 (1.2-5.7)		2.6 (1.2-5.7)
Hispanic			
Asian			
Other			

Findings and Implications

Requested Modes of Intervention

- Need for one-on-one counseling services (7.9%)
- Training on stress relief (5.9%)
- Health and wellness programs (5.9%)
- Support groups (5.8%)
- Web-based self-help (4.4%)
- Telephone counseling support (3.9%)
- Outreach discussion (3.7%)

Findings and Implications

Requested Modes of Intervention

- Faculty and staff also felt that programs teaching them how to help students cope (6.5%) would be beneficial
- Along with programs for parents to help children cope (4.2%).

Initial Recommendations

Recommendation 1 (A Shared Vision)

To develop a shared vision for all mental health activities with the goal of coordinating and integrating assessment and prevention/intervention efforts that address the psychosocial and behavioral consequences of the VT shootings (intermediate and long-term phases).

Recommendation 1 (A Shared Vision)

ACTION STEP

1A. Establish Workgroup

VT

NRV and, when necessary,
national experts

Create agreed-upon vision/framework
to guide prevention/intervention
during recovery process

Recommendation 1 (A Shared Vision)

ACTION STEP

1B. Identify funding mechanisms to support the development, implementation, and maintenance of this initiative.

Consider engaging graduate students, University and community resources.

Recommendation 2 (Prevention/Intervention)

Identify current prevention/intervention strategies

VT students

VT faculty/staff

Community members

Recommendation 2 (Prevention/Intervention)

ACTION STEP

1A. Convene representatives from
VT counseling centers
VT academic programs
Community sources

Identify prevention/intervention methods

Identify clients

Evaluate relative effectiveness

Recommendation 2 (Prevention/Intervention)

ACTION STEP

2B. Identify barriers/stigma preventing use of mental health services

Identify reasons for premature termination

Recommendation 2 (Prevention/Intervention)

ACTION STEP

3C. Conduct systematic examination of barriers of VT and community persons

- Focus groups

- Surveys

- Internet-based sources

- Other methods

Recommendation 2 (Prevention/Intervention)

ACTION STEP

4D. Ensure that “best practices” are used in every phase of prevention/intervention efforts

Recommendation 3 (Assessment/Screening)

Identify strategies to ensure systematic data collection and evaluation of all prevention/intervention efforts

Recommendation 3 (Assessment/Screening)

ACTION STEP

1A. Develop logic models for each entity providing services

VT students

VT faculty/staff

Community members

Document

Inputs/activities

outputs/outcomes

Recommendation 3 (Assessment/Screening)

ACTION STEP

2B. Identify funding mechanisms to underwrite this on-going effort

Recommendation 4

(Epidemiological Approaches)

Select and pilot epidemiologic methods to screen mental health functioning

VT students, faculty/staff
community members

Identify epidemiological approaches including

face to face

telephone based

web-based

school based

Recommendation 4 (Epidemiologic Approaches)

ACTION STEP

- 1A. Convene group of representatives from
 - VT counseling centers
 - VT academic programs
 - Community resources
- Identify and pilot various epidemiologic approaches with specific, targeted populations

Recommendation 4 (Epidemiologic Approaches)

ACTION STEP

2B. Determine alternative methods of data collection for those who perceive barriers with mental-health treatment

Focus groups

Surveys

Internet-based methods

Recommendation 4 (Epidemiologic Approaches)

ACTION STEP

3C. Identify funding mechanisms

Recommendation 5 (Research Agenda)

Develop a research agenda:

Identify/prioritize research areas

Formulate questions pertaining to the development and maintenance of mental health problems as well as effective prevention and intervention efforts

Design and carryout studies to address these questions

Recommendation 5 (Research Agenda)

ACTION STEP

1A. Establish a workgroup

VT Personnel

NRV, and, when appropriate,
national experts,

Create a research agenda formulating questions

Select methods and research strategies to examine issues related to etiology, prevention, intervention of mental outcomes

Recommendation 5 (Research Agenda)

ACTION STEP

2B. Identify funding mechanisms for this endeavor



GIMBLE