



THE BIG 10 UNIVERSITIES STUDENT SUICIDE STUDY and Beyond

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Suicide Among Leading Causes of Deaths United States - 2002

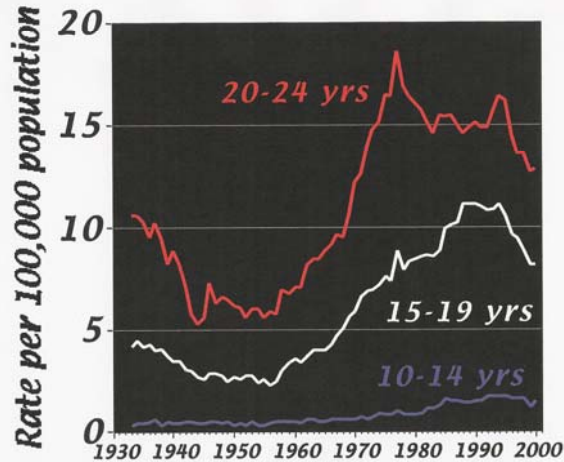
Age Groups

	5 - 14	15-24	25-34	35-44	45-64
1	Unintentional Injuries	Unintentional Injuries	Unintentional Injury	Unintentional Injury	Malignant Neoplasms
2	Malignant Neoplasms	Homicide	Suicide	Malignant Neoplasms	Heart Disease
3	Congenital Anomalies	Suicide	Homicide	Heart Disease	Unintentional Injuries
4	Homicide	Malignant Neoplasms	Malignant Neoplasms	Suicide	Cerebrovascular
5	Suicide	Heart Disease	Heart Disease	HIV	Diabetes Mellitus
6	Heart Disease	Congenital Anomalies	HIV	Homicide	Chronic Low. Respiratory Dis.
7	Chronic Low. Respiratory Dis.	Chronic Low. Respiratory Dis.	Diabetes Mellitus	Liver Disease	Liver Disease
8	Septicemia	HIV	Cerebrovascular	Cerebrovascular	Suicide
9	Cerebrovascular	Cerebrovascular	Congenital Anomalies	Diabetes Mellitus	HIV





Suicide Rates for Young Age Groups, 1933-2000

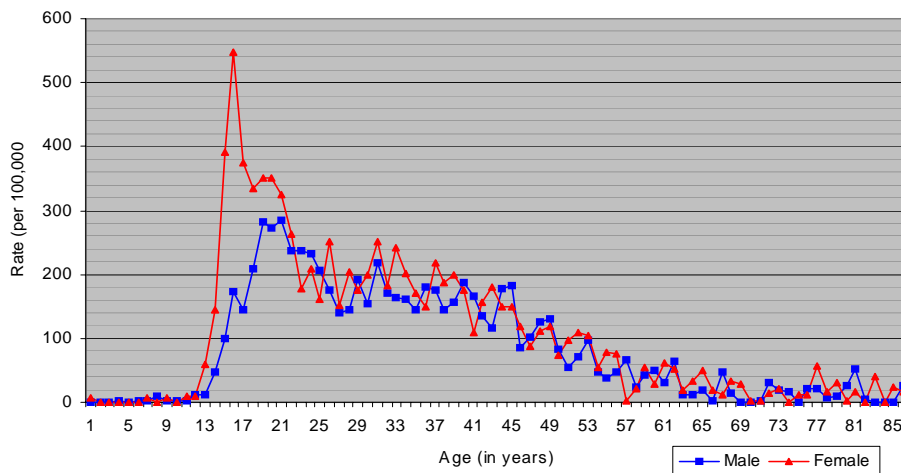


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SPRC Suicide Attempt Rates in the U.S. (2001)

Suicide Attempt Rates Among Males & Females (2001)



Suicide attempt rates are 1.2 x greater among females than males aged 18-24

[Source: CDC WISQARS Non-fatal 2001]

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Summary of Suicide & Suicide Attempts [Comparing 18-24 year olds to total population 2001]

Rate per 100,000	Males	Females	Both Genders
Suicide Rate*	17.61	4.10	10.73
18-24 only	19.73	3.00	11.57
Suicide Attempt Rate*	102.82	123.48	113.34
18-24 only	251.42	264.44	257.77
Ratio Suicide Attempts/Suicide*	5.84	30.14	10.56
18-24 only	12.75	88.00	22.28

*Rate for total population

- Female youths attempt at a slightly higher rate, however
- Male youths are more likely to have a fatal outcome

[Source: CDC WISQARS Fatal & Non-fatal 2001]



U.S. College and University Population

- More teenagers and young adults die from suicide than from all medical illnesses combined
- Approx. 14 million students currently attend over 4,500 American colleges and universities.
- An estimated 9 million college/university students are between ages 18-24 (representing over one-quarter of all 18-24 year-old in the U.S.)
- College and university students constitute an important, but in many respects underserved, population for public health interventions.





Suicide Among College Undergraduates

- Since we do not know the rate of suicide & attempts *specifically* among college undergraduates,
 - We can make our best estimate as to the number of college undergraduates *likely to die from or attempt suicide* based on what we currently do know,
 - # male 18-24 year old undergraduates: 5,043,000¹
 - # female 18-24 year old undergraduates: 4,324,000¹
 - Multiply by rate of suicide & attempts among 18-24 year old population²

[Source: 1. U.S. Census Bureau 2002 & 2. CDC WISQARS Fatal & Non-fatal 2001]



Suicide Among College Undergraduates

- Thus, we have an estimate of the number of suicides and attempts among 18-24 year old undergraduates per year
 - 1,004 suicides and 24,207 attempts^{1,2}
- However, 18-24 year olds constitute ~70% of the undergraduate college population²
 - And since we do not know the exact age distribution of college undergraduates, we will assume that the rate of suicide and attempts among the remaining 30% will be the same, [will render more conservative estimate than result of 18-24 yr old rate * all undergraduate population], *thus*
- Estimate of total number of suicides and attempts among ALL college undergraduates per year
 - 1,305 suicides and 31,469 attempts^{1,2}

[Source: 1. U.S. Census Bureau 2002 & 2. CDC WISQARS Fatal & Non-fatal 2001]





- All Midwestern universities
- Most in same athletic conference
- Student populations: 20,000 – 50,000
- Approximately 350,000 lives/year
- Similar gender, ethnic/racial, age distributions
- Members of Big 10 Universities Counseling Center Directors Organization
- Study supported by VPs for Student Affairs



Big Ten Suicide Study: Age Distribution of Suicides

AGE	MALE	FEMALE	TOTALS
17-19	27 (14%)	6 (9%)	33 (13%)
20-24	87 (45%)	34 (49%)	121 (46%)
25-29	45 (23%)	15 (22%)	60 (23%)
30-34	12 (6%)	7 (10%)	19 (7%)
35-39	12 (6%)	4 (6%)	16 (6%)
40-44	3 (2%)	3 (4%)	6 (2%)
45-49	2 (1%)	--	2 (1%)
Unknown	4 (2%)	--	4 (2%)
	192 (74%)	69 (26%)	261





Big Ten Suicide Study: Race Distribution of Suicides

RACE	MALE	FEMALE	TOTALS
Caucasian	166 (86%)	61 (88%)	227 (87%)
Afro-American	6 (3%)	1	7 (2.7%)
Asian/Pacific Isl.	4 (2%)	1	5 (2%)
Foreign	11 (5.7%)	4 (5.7%)	15 (5.7%)
[African]	[1]	[1]	[2]
[Asian]	[3]	[3]	[6 (2%)]
[Indian]	[5(2.6%)]	--	[5 (2%)]
[Spanish]	[2]	--	[2]
Unknown	5 (2.6%)	2	7 (2.7%)
	192 (74%)	69 (26%)	261



Big Ten Suicide Study: Class Year of Suicides

STATUS	MALE	FEMALE	TOTALS
Freshman	22 (11%)	6 (9%)	28 (11%)
Sophomore	34 (18%)	6 (9%)	40 (15%)
Junior	34 (18%)	16 (23%)	50 (19%)
Senior	42 (22%)	14 (20%)	56 (21%)
Graduate	57 (30%)	27 (39%)	84 (32%)
Other	3 (2%)	--	3 (1%)
	192 (74%)	69 (26%)	261

Big Ten Suicide Study: Age by Class Year of Suicides

AGE	Fresh	Soph	Jun	Sen	Grad	Total
17	2					2
18	10	1				11
19	6	12	2			20
20	5	7	12			24
21	3	9	12	11	1	36
22	--	3	11	13	1	28
23	--	2	2	8	6	18
24	1	--	2	4	8	15
25	--	2	4	4	9	19
26	--	1	--	1	9	11
27	--	2	1	3	3	9
28			1	3	7	11
29			1	1	7	9
Total	27	39	48	48	51	213
%	12.7%	18.3%	22.5%	22.5%	24%	



Big Ten Suicide Study: Suicide Rates By Age and Class Year

AGE	Fresh	Soph	Jun	Sen	Grad
17	4.3				
18	2.6	2.9			
19	2.9	4.6	5.8		
20	10.4	3.3	5		
21	22.2	13.3	6	5.3	8.1
22		13.9	14.5	7.2	1.7
23		16.1	7.3	10.1	7.6
24	23.8		12.4	11.6	9.9
25		32	36.1	18.3	12
26		21		6.4	13.6
27		58.7	16.4	25.5	5.2
28			20.7	31.5	14
29			25.1	13.1	16.2



Big Ten Suicide Study: Day of Week by Class Year

Day	F	S	J	S	G	Total
Mon	3	3	9	9	13	37 (14%)
Tues	3	4	7	6	12	32 (12%)
Wed	6	7	7	9	13	42 (16%)
Thur	6	3	4	6	13	32 (12%)
Fri	2	7	10	10	12	41 (16%)
Sat	2	9	4	5	7	27 (11%)
Sun	6	6	8	10	7	37 (14%)
Unk	0	1	1	1	7	10 (4%)
Total	28	40	50	56	84	258
%	10.8	15.5	19.4	21.7	32.6	
Wkday	20	24	37	40	63	184
%	71	60	74	71	75	71
Wkend	8	15	12	15	14	64
%	29	38	24	27	17	25

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Big Ten Suicide Study: Month by Class Year

Mon	F	S	J	S	G	Total
Jan	3	4	4	3	8	22 (9%)
Feb	1	2	7	6	9	25 (10%)
Mar	3	1	5	9	8	26 (10%)
Apr	2	1	4	3	9	19 (7%)
May	2	3	2	4	6	17 (7%)
June	4	4	3	3	3	17 (7%)
July	1	5	1	2	3	12 (5%)
Aug	2	1	6	3	11	23 (9%)
Sept	1	4	4	2	8	19 (7%)
Oct	4	3	12	6	11	36 (14%)
Nov	3	8	1	6	1	19 (7%)
Dec	2	3	0	8	5	18 (7%)
Unk	0	1	1	1	2	5 (2%)
Total	28	40	50	56	84	258
%	10.8%	15.5%	19.4%	21.7%	32.6%	


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Big Ten Suicide Study: E Code by Class Year

E Code	Class Year					Total
	Fresh	Soph	Jun	Sen	Grad	
950 Chemical Poisoning	3 (11%)	8 (20%)	9 (18%)	7 (13%)	30 (36%)	57 (22%)
952 Gas	5 (18%)	3 (8%)	7 (14%)	9 (16%)	4 (5%)	28 (11%)
953 Hanging/Asphyx.	6 (21%)	8 (20%)	6 (12%)	11 (20%)	15 (18%)	46 (18%)
954 Drowning					2 (2%)	2 (1%)
955 Firearms	6 (21%)	12 (30%)	17 (34%)	21 (38%)	17 (20%)	73 (28%)

Big Ten Suicide Study: E Code by Class Year



E Code	Class Year					Total
	Fresh	Soph	Jun	Sen	Grad	
956 Knife	1 (4%)	1 (3%)		1 (2%)	1 (1%)	4 (2%)
957 Jumping	4 (14%)	6 (15%)	3 (6%)	3 (5%)	6 (7%)	22 (9%)
958 Vehicle/Elect.	1 (4%)		1 (2%)	2 (4%)	3 (4%)	7 (3%)
Unknown	2 (7%)	2 (5%)	7 (14%)	2 (4%)	6 (7%)	19 (7%)
Total	28	40	50	56	84	258



Big Ten Suicide Study:


Suicide Rates Compared to the U.S. Population 1980-1990

Age	University Students			National Rates		
	F	M	T	F	M	T
17-19	1.2	5.7	3.4	4.0	19.1	11.7
20-24	4.5	9.0	7.1	4.8	25.5	15.2
25-29	10.0	16.3	14.1	5.9	25.7	15.8
30-34	9.6	9.9	9.8	6.6	24.4	15.4
35-39	9.0	24.1	17.0	7.2	23.3	15.1
40-44	12.5	17.0	14.4	7.9	22.2	14.9
45-49	0.0	32.4	11.8	8.6	22.7	15.5
Total	4.5	10.0	7.5	6.4	23.7	15.0

Evidence for Rise in Psychological Distress

- Big 10 Universities Student Suicide Study (1980-1990)
- CDC's YRBS (1999 - 2003)
- CDC's NCHRBS (1995)
- ACHA-NCHA - Spring 2000 - 2004
- AUCCCD's Annual Surveys
- Published literature





- Earlier identification and referral (high school)
- Improved treatment options
- Decreased stigma (high school & college)
- Increased accessibility/availability
- Greater parity with physical health
- Decreased 3rd party coverage & reimbursement
- Increased perturbation and uncertainty in world
- Cohort effect?



NATIONAL COLLEGE HEALTH RISK BEHAVIOR SURVEY
1995

During the past 12 months	Male	Female	Total
1. Thought seriously about attempting suicide	9.7%	10.8%	10.3%
2. Made a suicide plan	7.2%	6.3%	6.7%
3. Attempted suicide (≥ 1)	1.7%	1.3%	1.5%
4. Suicide attempt requiring medical attention	0.5%	0.3%	0.4%
Current frequent alcohol use (≥ 20 of last 30 days)	6.6%	2.2%	4.2%
Current episodic heavy drinking (≥ 5 DRINKS / EPISODE)	43.8%	27.0%	34.5%
Current marijuana use (≥ 1 in last 30 days)	17.1%	11.6%	14.0%
Lifetime cocaine use (ever tried)	14.8%	14.1%	14.4%

* 7.1 M 18-24 year old college students in USA.



Replication of YRBS Findings
 ACHA (2000) 16,000 students surveyed


	Female	Male	Total
Seriously considered suicide ($\geq 1x/yr$)	9.9%	9.7%	9.5%
Attempted suicide ($\geq 1x/yr$)	1.4%	1.6%	1.5%
Diagnosed with depression	4.8%	2.3%	

ISA


Replication of YRBS Findings
 ACHA (2000) 16,000 students surveyed

	Female	Male	Total
Very Sad ($\geq 3x/yr$)	55.5%	41.9%	50.3%
Hopeless ($\geq 3x/yr$)	36.5	28.3	33.4
So depressed could not function ($\geq 3x/yr$)	24.0	19.0	22.1

ISA

 ACHA-NCHA vs. NCHRBS Findings			
ACHA-NCHA Spring 2000 (N=15,977)	Male	Female	Total
Seriously Considered Attempting Suicide	8.7%	9.9%	9.5%
Attempted Suicide	1.6%	1.4%	1.5%
NCHRBS 1995 (N=4,609)			
Seriously Considered Attempting Suicide	9.3%	10.4%	10.0%
Attempted Suicide	1.7%	1.4%	1.5%

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 ACHA-NCHA Findings: 2000 to 2004			
Within the last school year have you.....	2000	2002	2004
Felt Very Sad	80.6%	82.0%	80.9%
Felt Depressed	44.4%	44.8%	45.1%
Been Diagnosed with Depression	10.3%	11.8%	14.9%
Seriously Considered Attempting Suicide	9.5%	10.0%	10.1%
Attempted Suicide	1.5%	1.6%	1.4%

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QUESTION

DOES THIS TELL US THE WHOLE STORY?

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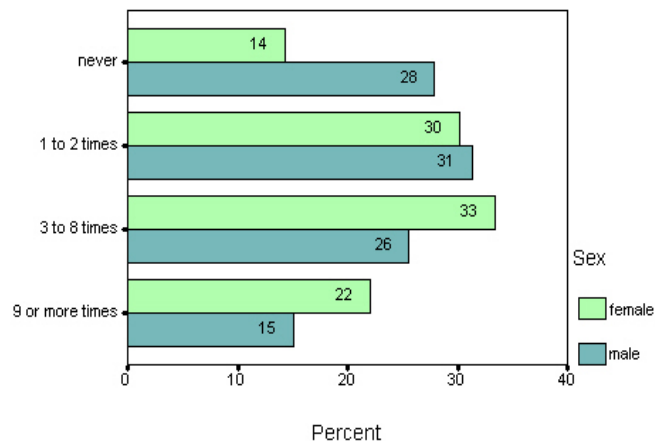


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ACHA-NCHA Spring 2004

Felt Very Sad

Last School Year

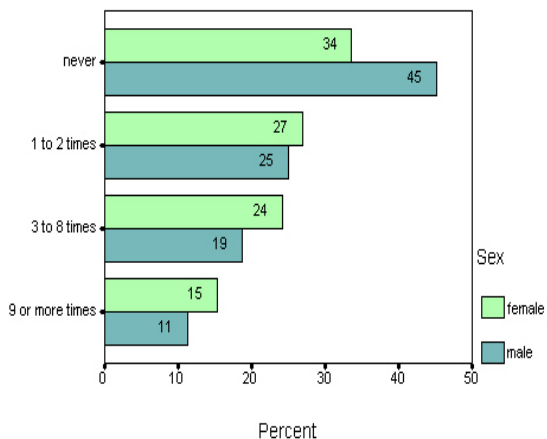


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SPRC ACHA-NCHA Fall 2004

Felt Hopeless

Last 12 Months



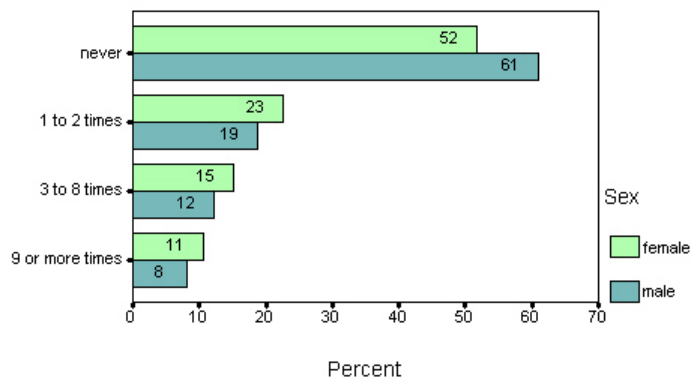
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SPRC ACHA-NCHA Spring 2004

Felt So Depressed

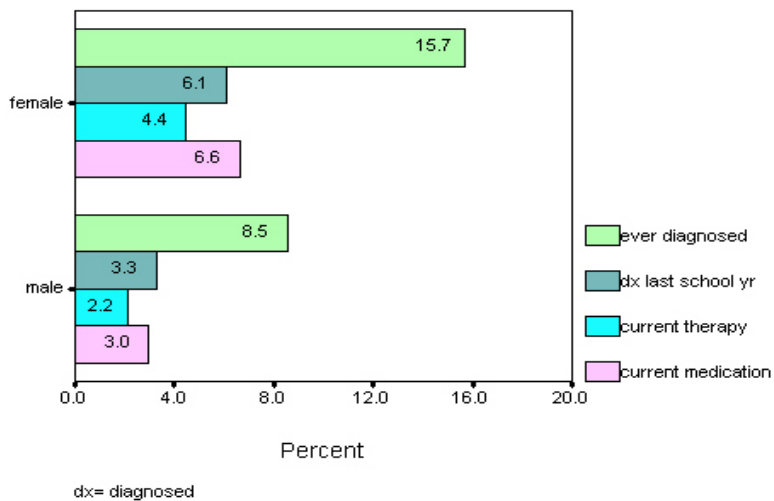
Difficult to Function

Last School Year



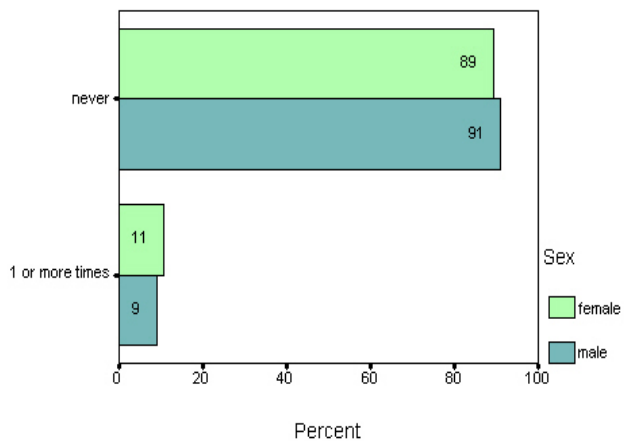
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Depression Diagnoses & Treatment



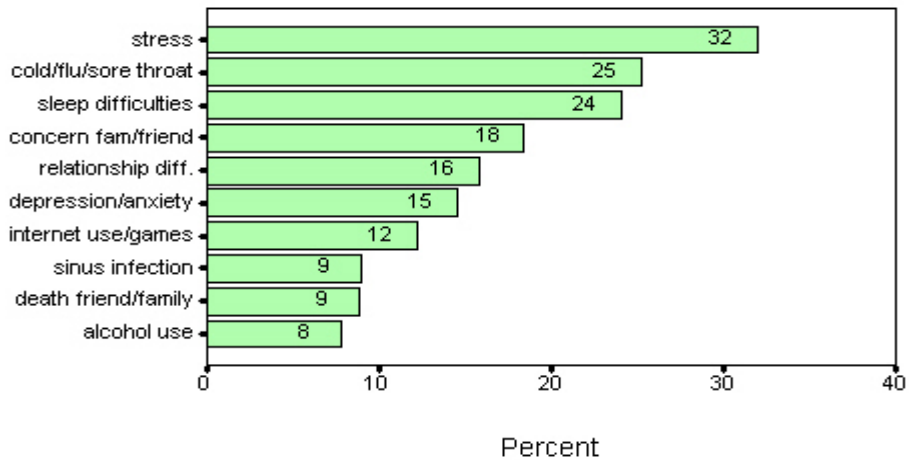
Seriously Considered Suicide

Last School Year



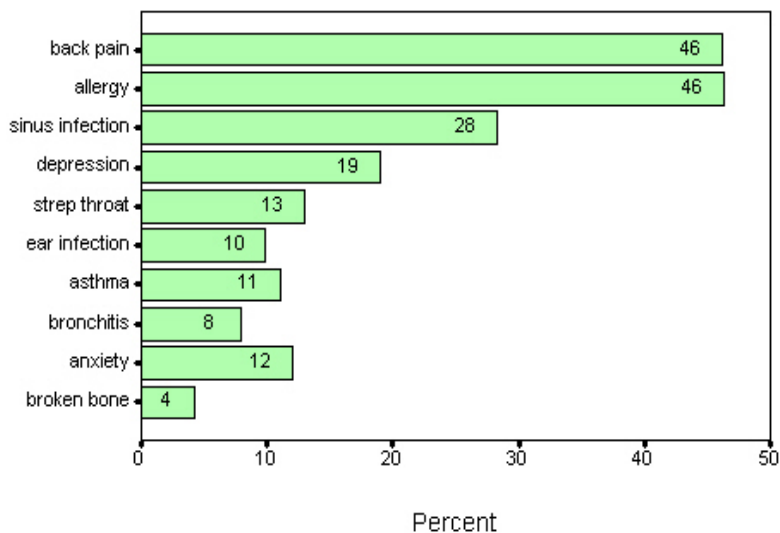
Top 10 Impediments to Academic Performance

Last School Year



Top 10 Physical and Mental Problems

Last School Year



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2003 AUCCCD Survey

- 81.4% report seeing more students with serious psychological problems than 5 years ago. This is the #1 service provision concern (77.2%) and the #1 administrative concern (49.5%)
- 40.7% of clients have severe psychological problems
- Utilization of services: 9.8% is average (goes up to 40%) for entire campus per year
- 160 suicides in 2002-03, but only 31 were current or former counseling center clients (19.4%)

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2004 AUCCCD SURVEY

92% of directors report an increase in students coming to counseling who are already on psychiatric medications

Directors report that 41.3% have severe psychological problems, 8.7% have impairment so serious that they cannot remain in school, or can only do so with extensive psychological/psychiatric help, while 32.6% experience severe problems but can be treated successfully.

Only 19.7% of student suicides were current or former counseling center clients

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QUESTIONS

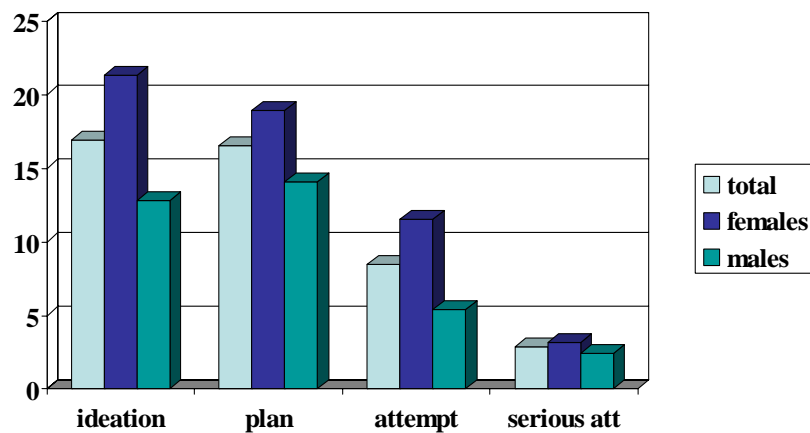
- WHAT IS CAUSING THESE STUDENTS TO BE SO SUICIDAL AND DISTRESSED?
- ARE COLLEGES CREATING STRESSED OUT STUDENTS?

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YRBS, 2003



Source: MMWR (2004, May 21)

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Ecological Fallacy

**ONE CANNOT NECESSARILY
EXTRAPOLATE FROM POPULATION
DATA TO AN INDIVIDUAL PERSON --
- THE CHALLENGE IN WORKING
WITH INDIVIDUALS IS TO
PROPERLY ASSESS AND FORESEE
THE LIKELIHOOD OF FUTURE SELF-
DESTRUCTIVE BEHAVIORS AND
INTERVENE APPROPRIATELY**

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Why Now?

Changes in:

- Medication
- Psychiatric Symptoms
- Physical Symptoms
- Social Support
- Professional Support
- Impulsivity Controls
- Violence Potential
- Sense of Hope
- Sense of a Future
- Sense of Stability
- Sense of Security

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What is the greatest precipitating factor among youth suicide?

Among all 18-24 year olds who died by suicide:

- Almost 50% were due to intimate partner problems
- Important to attend to youth who have had a recent life event (relationship problem), who are depressed, and a tendency towards impulsiveness, especially within 2 weeks of life event

[Source: Harvard NVISS Pilot 2001]




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PREVENTION vs. TREATMENT

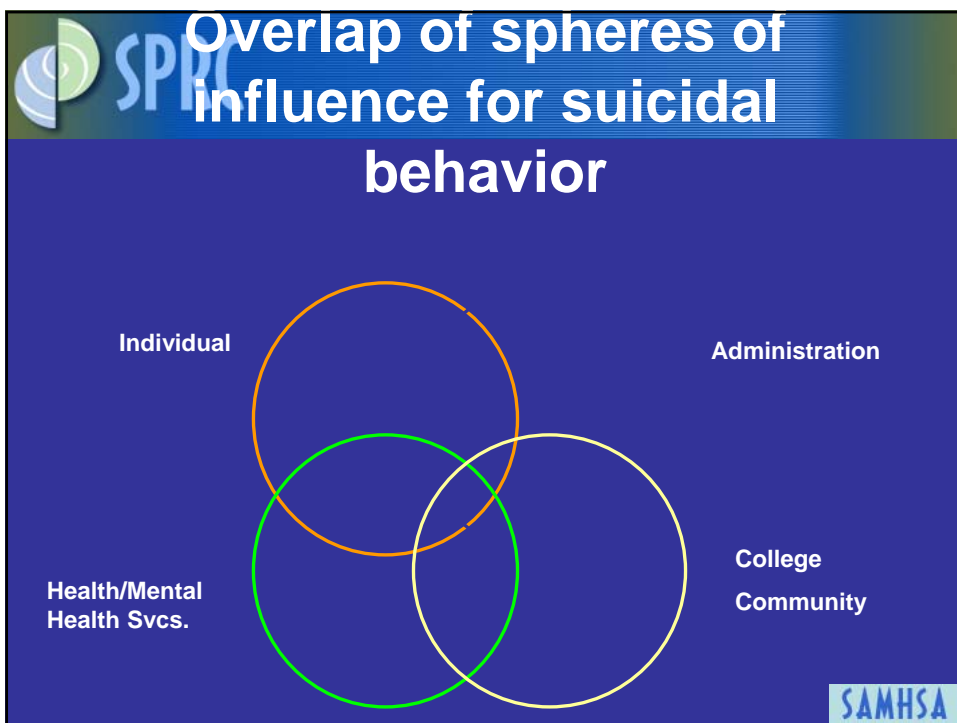
	Prevention	Treatment
Goals	Health Promotion Disease Prevention Reduce Incidence - 1 ⁰ Reduce Prevalence -	Reduce Disability 3 ⁰ Restore to Prior Status Correct Deficits
Target Audience	2 ⁰ Communities Groups at Risk	Individual Patients
Settings	Community/School Regional/ National	Office/Clinic (1:1)
Duration	Lifespan	Time-limited Time-specific

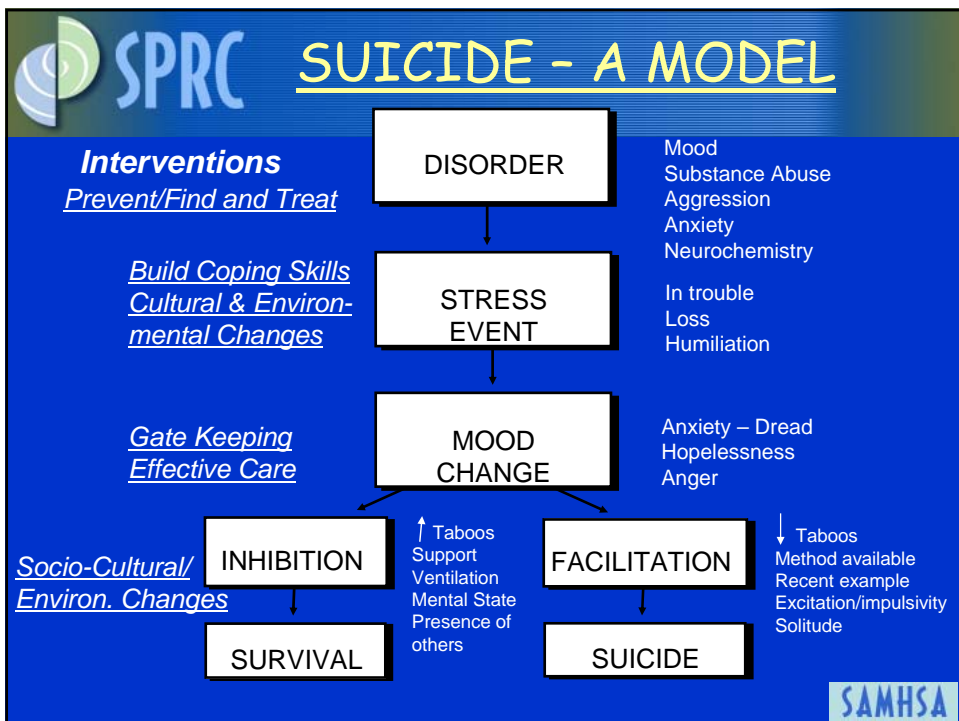
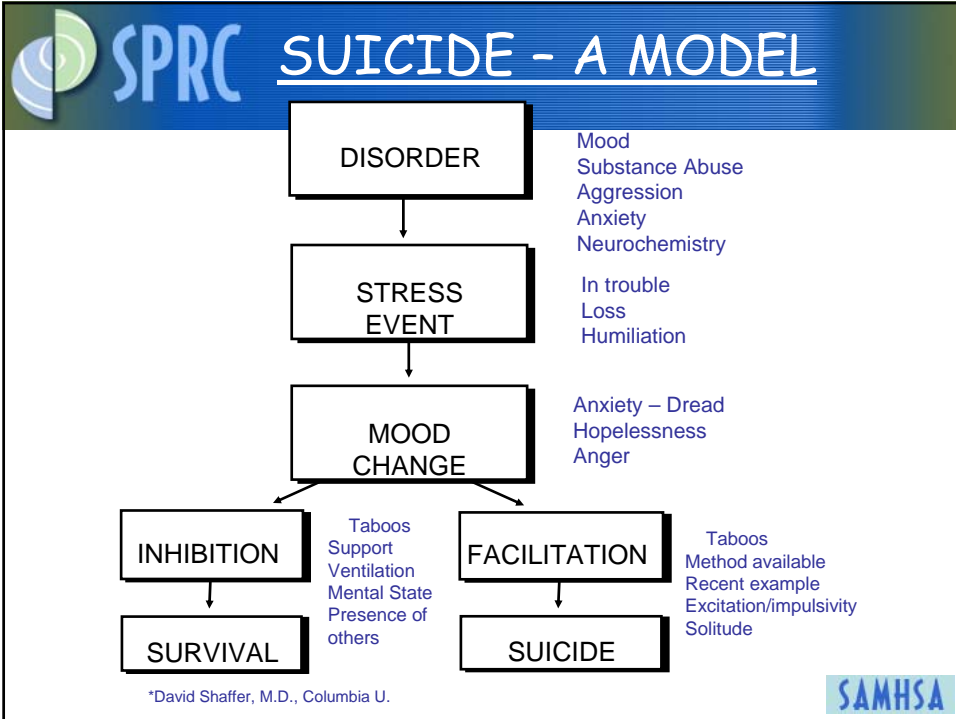


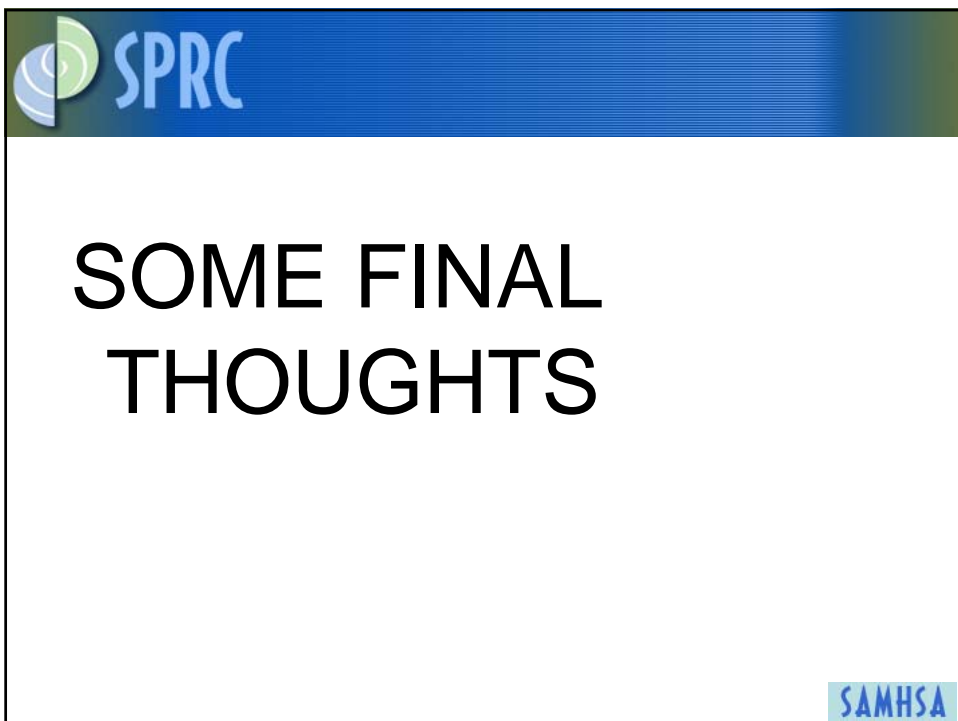
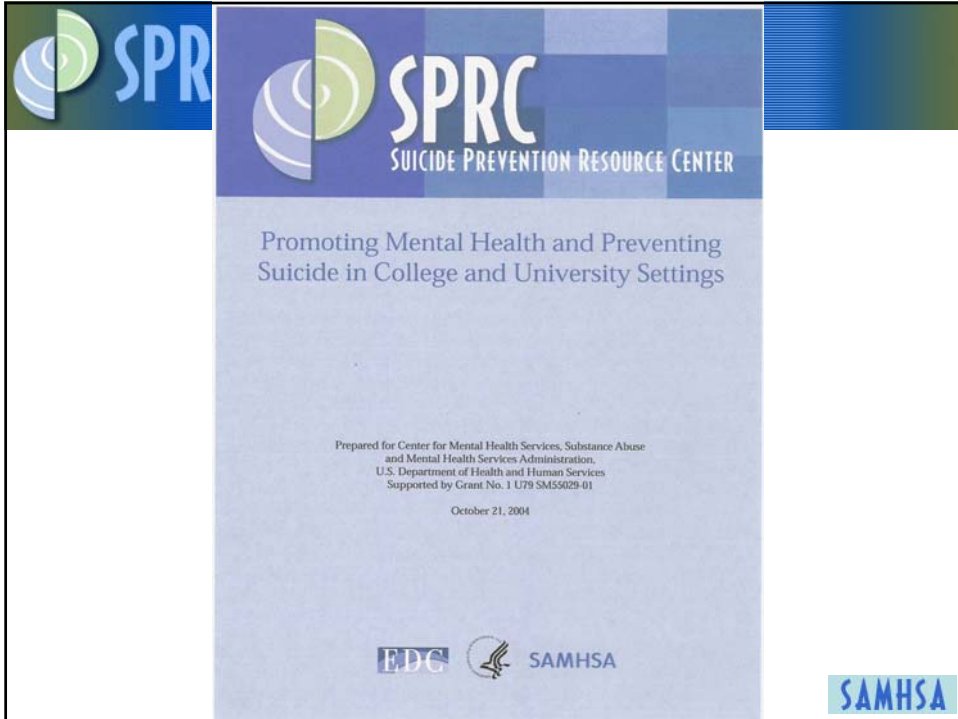
 **PREVENTION vs. TREATMENT**

	Prevention	Treatment
Focus	Knowledge Change Attitude Change Behavior Change	Symptom-specific Specific Disorders or Diseases
Tools	Surveillance Development Implementation Evaluation	Cognitive/Behavioral Emotional Retrospective
Techniques	Education/Training Social Support Outreach Media/ Conferences	Introspection/Insight Medications Physical Therapies Crisis Intervention











SPRC SUICIDE IS NOT THE PROBLEM

Suicide is the behavioral solution to a perceived insoluble problem that is no longer tolerable

IF all behavior is multi-determined...then approaches to preventing suicidal behaviors

.....and insoluble problems..... can take many forms


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SPRC Final Recommendations

- Suicide prevention is everyone's business
- There is no single, fool-proof prevention strategy
- Be vigilant
- Stay focused
- Don't become complacent

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 **SPRC A Final Observation**

Suicide rates on college and university campuses are lower than in the general population.....THANKS TO YOU

KEEP UP THE GOOD WORK

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**Contact SPRC**

- Phone: 877-GET-SPRC (438-7772)
- TTY: 617-964-5448
- Web: www.sprc.org
- Email: info@sprc.org
- Mail: Suicide Prevention Resource Center
55 Chapel Street
Newton, MA 02458-1060

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