

Addressing Issues of Drug Use, Gender and Trauma

Sally Stevens, Ph.D.

Bridget Murphy, BA

Christine Bracamonte Wiggs, MPH

Southwest Institute for Research on Women

University of Arizona

For more information: sstevens@dakotacom.net

Presented at: Delinquency, Crime, and Substance Abuse Services for Adolescents Conference

Denver, Colorado

May 17-18, 2004

Overview of Presentation

- What is trauma?
- Effects of trauma on the individual
- Prevalence of traumatic stress in substance involved adolescents
- Study 1: Adolescent environmental stress by gender and treatment / no treatment conditions
- Study 2: Adolescent traumatic stress by gender in relationship to substance abuse, mental health, physical health, and HIV-risk behavior
- Treatment implications and strategies for adolescents presenting with substance abuse and traumatic stress

What is Trauma?

Post Traumatic Stress Disorder (PTSD) – A diagnostic label that refers to persistent effects of stress following a traumatic event.

- Recurring intrusive recollection of the traumatic event
- Persistent avoidance of stimuli associated with the traumatic event
- Persistent symptoms of increased arousal

What is Trauma?

- Complex PTSD or Disorders of Extreme Stress (DESS) – Associated with cumulative trauma that occurs over time
- Traumatic Stress – Accounts for experiences of trauma that may lead to PTSD, complex PTSD or stress that leads to life disruption
- Environmental Stress - Events or situations that cause one to feel tension, pressure or negative emotions resulting from conditions in the environment

Effects of Trauma: Physiological

- Stored memories of traumatic events (information, emotional)
- Physical response (heart rate, startle response, blood pressure)
- Medical problems (somatic symptoms, pain, asthma)

Effects of Trauma: Behavioral

- Anti-social behavior (criminality, conduct disorder)
- Health-related (substance use, sexual risk, sleep disorders)
- Cognition (school dropout, attention deficit)
- Social-related (relationships, trust)
- Personal and mental health-related (suicide, identity, anxiety)

Prevalence of Trauma Among Adolescent Substance Users Presenting to Treatment

- 40% - 90% lifetime
- 20% - 25% past 90 days
- Rates for females are almost double that of males
- Males have higher rates of trauma resulting from physical victimization while females have higher rates of trauma resulting from sexual victimization
- Rates of trauma vary by level of care

Study 1: Adolescent Environmental Stress

- Sample includes 514 participants who were enrolled in one of five substance abuse treatment or a prevention project
- Five programs were:
 - La Cañada
 - Drug Court
 - Seven Challenges
 - Teen Substance Abuse Treatment
 - Youth Empowerment Project
- All participants administered the Environmental Stress Inventory (Stevens, S.J. and Murphy, B.S. 1998) at baseline.

La Cañada

- Administered by Arizona's Children Association and CODAC Behavioral Health in Tucson, AZ
- Residential step-down model of substance abuse treatment
 - 30-days residential
 - 60-days intensive outpatient
 - 60-days regular outpatient
- Cognitive behavioral model of treatment

Drug Court

- Administered by CODAC Behavioral Health in collaboration with Pima County Juvenile Court Center in Tucson, AZ
- Nine months of intensive outpatient treatment
- Cognitive behavioral therapy with intensive court supervision

Seven Challenges

- Administered by Providence, Corporation in collaboration with Robert Schwebel, Ph.D. in Tucson, AZ
- Two month intensive outpatient treatment
- Utilized Seven Challenges curriculum which is based on Stages of Change

Teen Substance Abuse Treatment (TSAT)

- Administered by EMPACT-SPC in Phoenix, AZ
- Ninety-day (90) intensive outpatient treatment
- Family- and group-based model of treatment

Youth Empowerment Project (YEP)

- Administered by University of Arizona in collaboration with Tucson Urban League and Providence, Corporation in Tucson, AZ.
- Six-week, 90-minute, classroom prevention project
- Provides strength-based substance abuse and HIV curriculum

Environmental Stress Inventory (ESI)

Stevens and Murphy 1998

- Assesses lifetime and past 90 day stress with regard to:
 - family (9 items)
 - social (7 items)
 - education (5 items)
 - legal (10 items)
 - individual (4 items)
- Assesses age when first experienced the specific stress event
- Assesses level of upsetness for positive responses for past 30 days

Results of Environmental Stress Study

Description of Participants

	La Canada (n=164)	Drug Court (n=74)	Seven Challenges (n=43)	TSAT (n=114)	YEP (n=119)
Age (<i>M</i>)	15.8	15.6	15.2	15.7	15.9
Female (%)	30	28	29	23	56
Non-white (%)	62	54	44	54	80

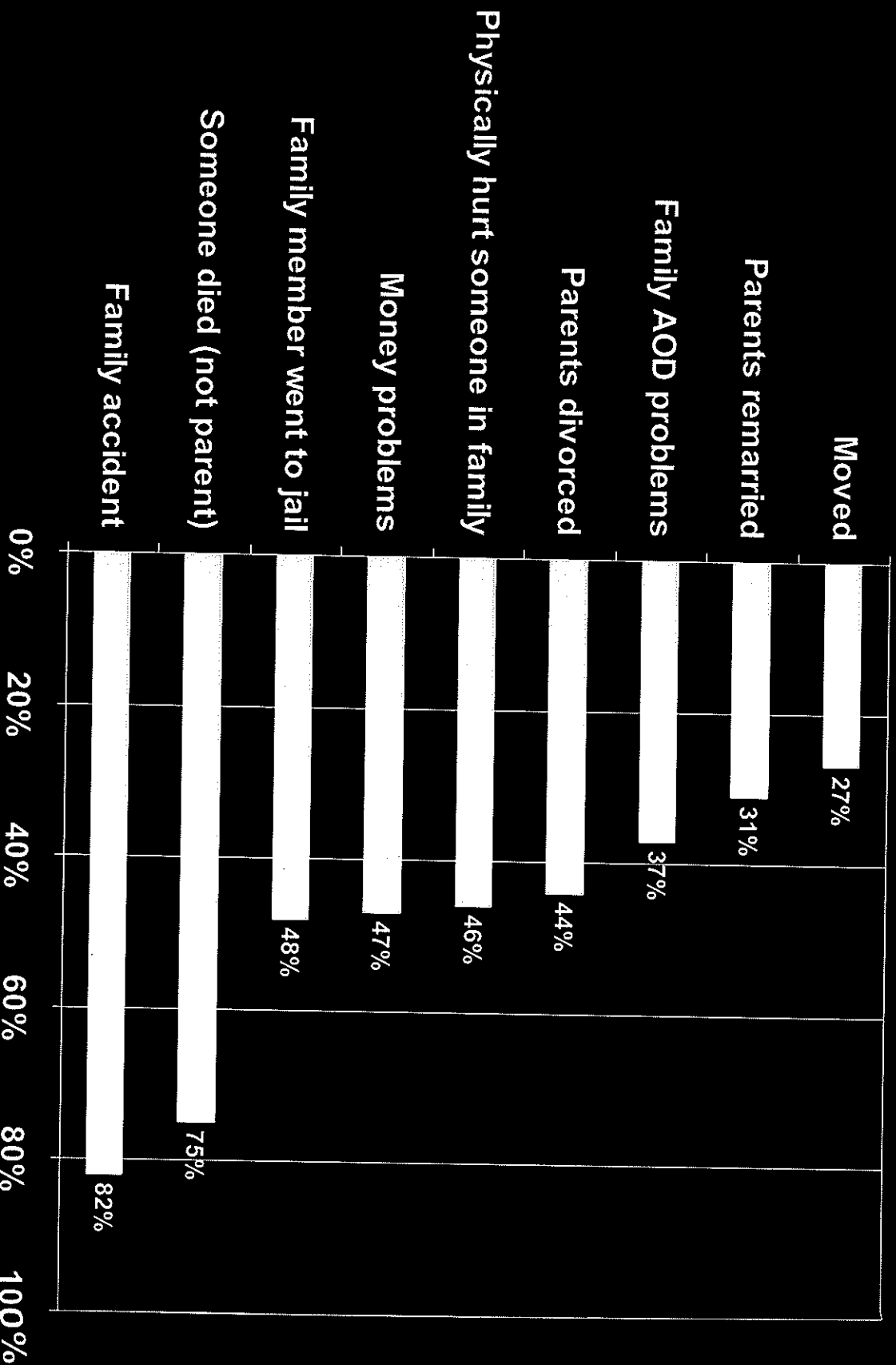
Family (n=514)

	Ever Experienced	Level of Upset
	%	%
Someone in family died (not parent)	74	75
Moved	72	27
Family AOD problems	71	37
Family member went to jail	67	48
Family accident	65	82

Family (n=514)

	Ever Experienced	Level of Upset
	%	%
Parents divorced	60	44
Serious money problems	41	47
Physically hurt someone in family	34	46
Parents remarried	33	31

Family Levels of Upset (n=514)

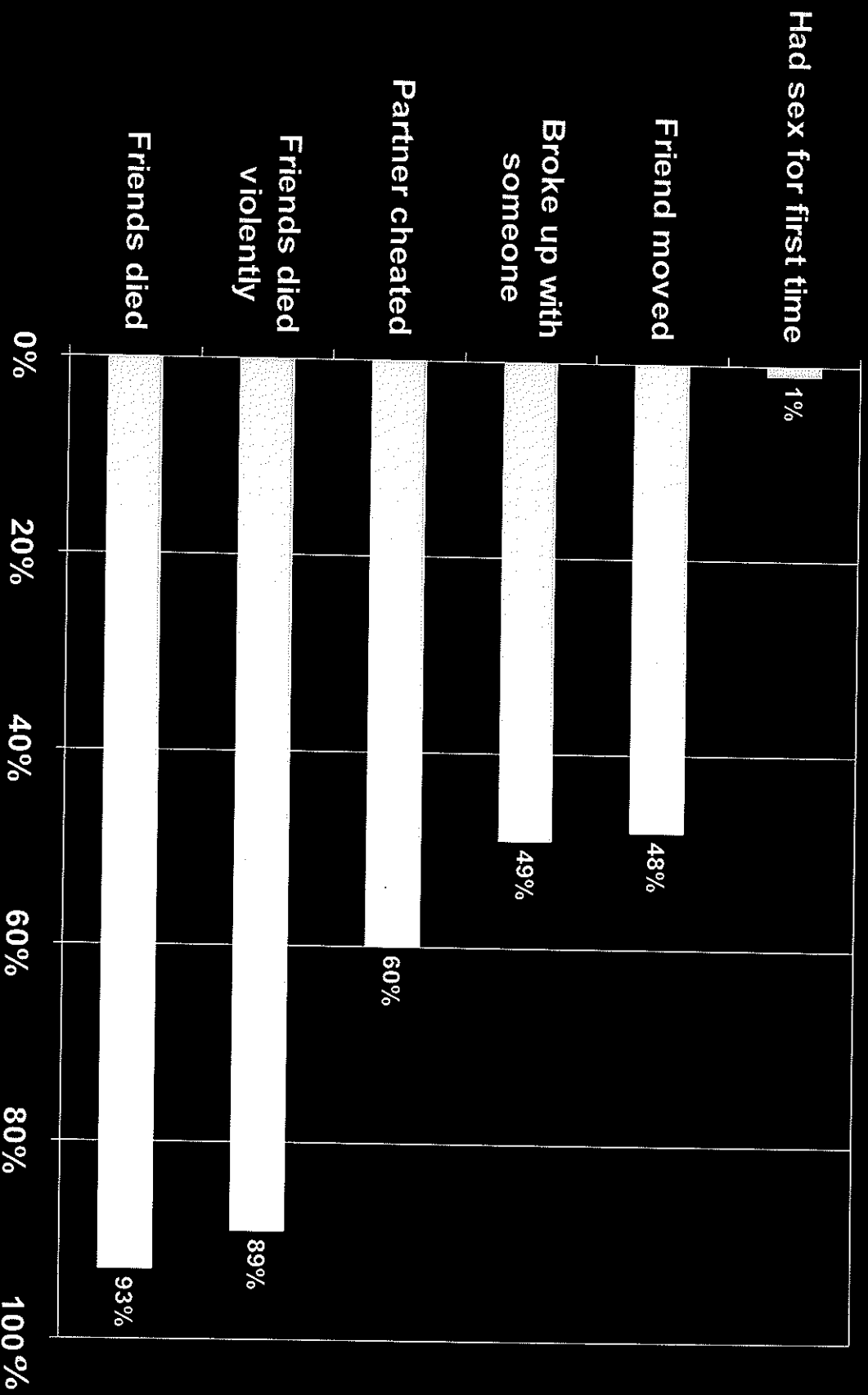


Social: Peers and Partners (*n*=514)

	Ever Experienced	Level of Upset
	%	%
Had sex for the first time	84	1
Broke up with partner	67	49
Friend moved	56	48
Friends died	46	93
Partner cheated	42	60
Friends died violently	41	89

Social: Peers and Partners Levels of Upset

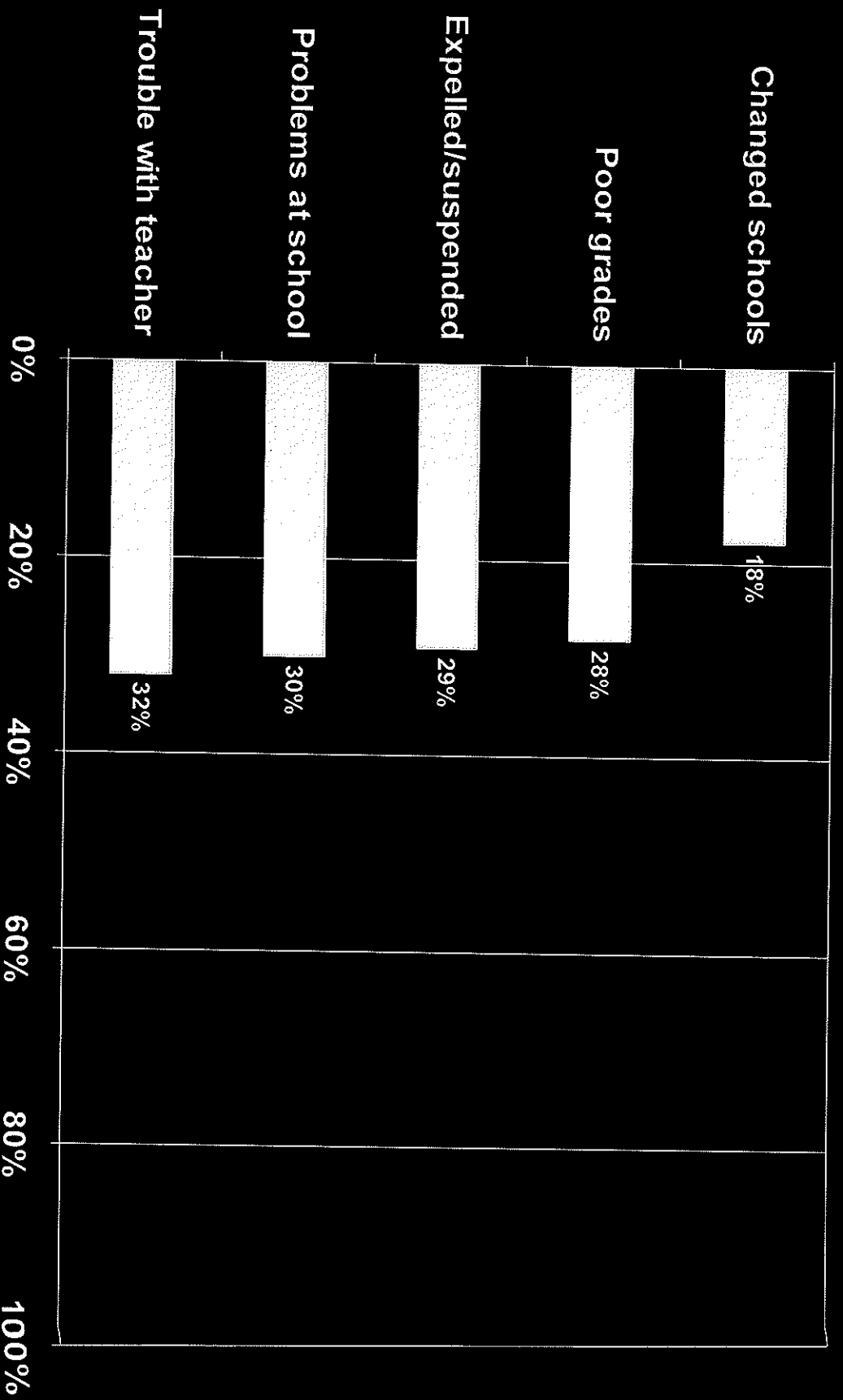
(*n*=514)



Education and Schooling (*n*=514)

	Ever Experienced	Level of Upset
	%	%
Changed schools	89	18
Poor grades	86	28
Expelled/suspended	81	29
Problems at school	75	30
Trouble with teacher	58	32

Education/Schooling Levels of Upset ($n=514$)



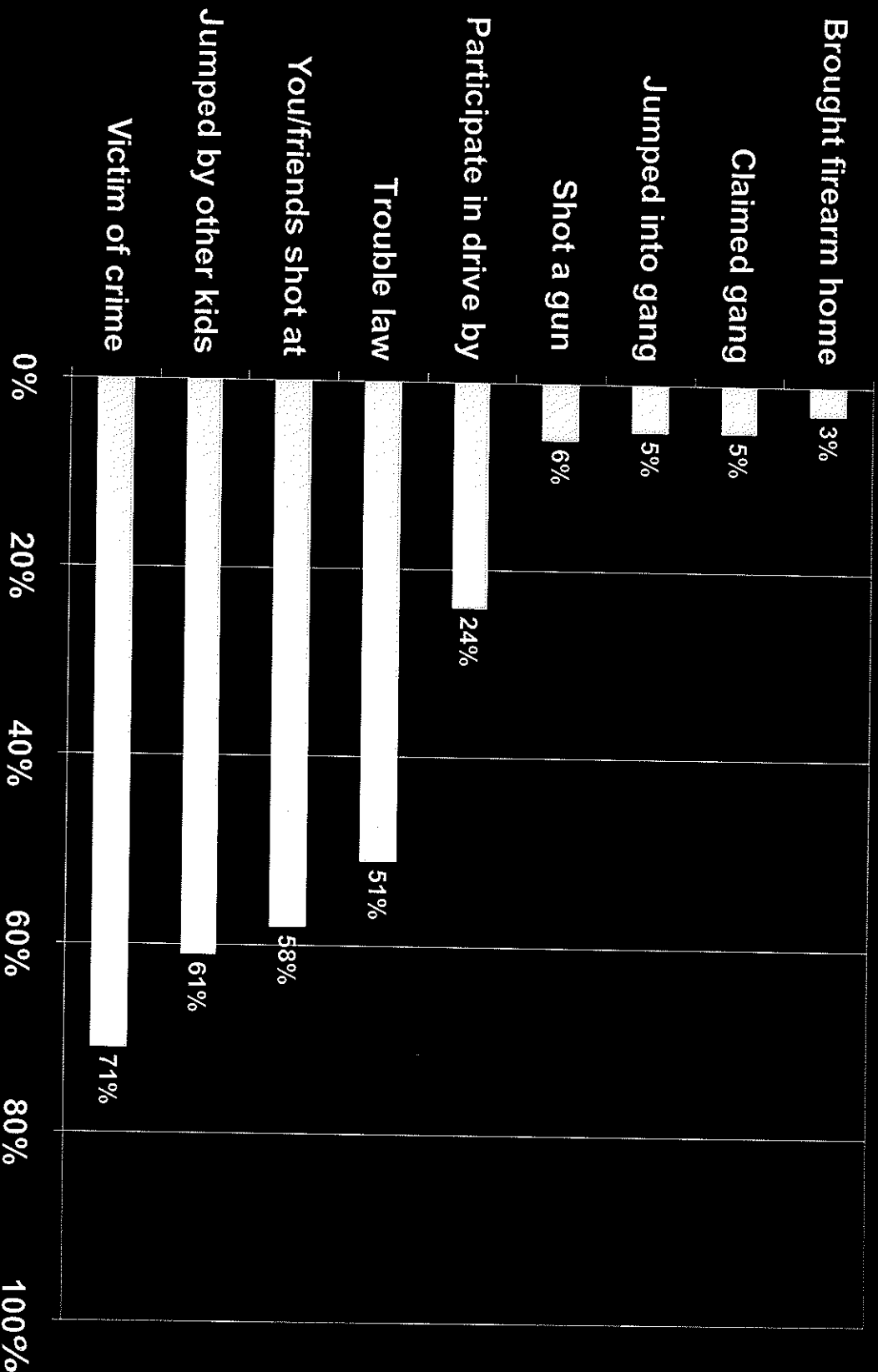
Criminality (*n*=514)

	Ever Experienced	Level of Upset
	%	%
Trouble with law	86	51
Shot a gun at someone/thing	54	6
You/friends shot at	52	58
Jumped by other kids	41	61
Brought firearm home	40	3

Criminality (*n*=514)

	Ever Experienced	Level of Upset
	%	%
Victim of crime	39	71
Jumped into a gang	22	5
Participated in a drive by	14	24
Claimed gang	12	5

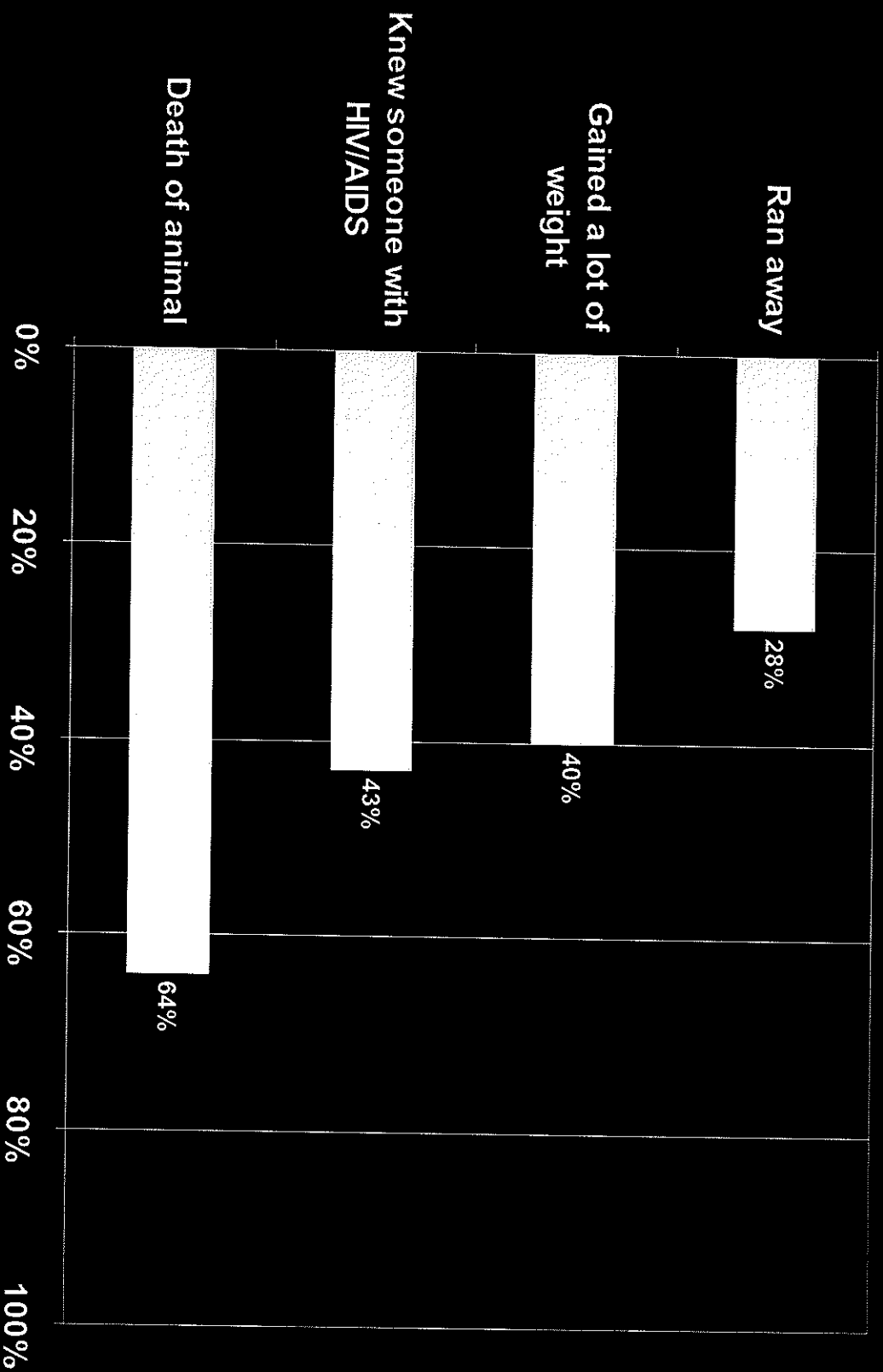
Criminality Levels of Upset ($n=514$)



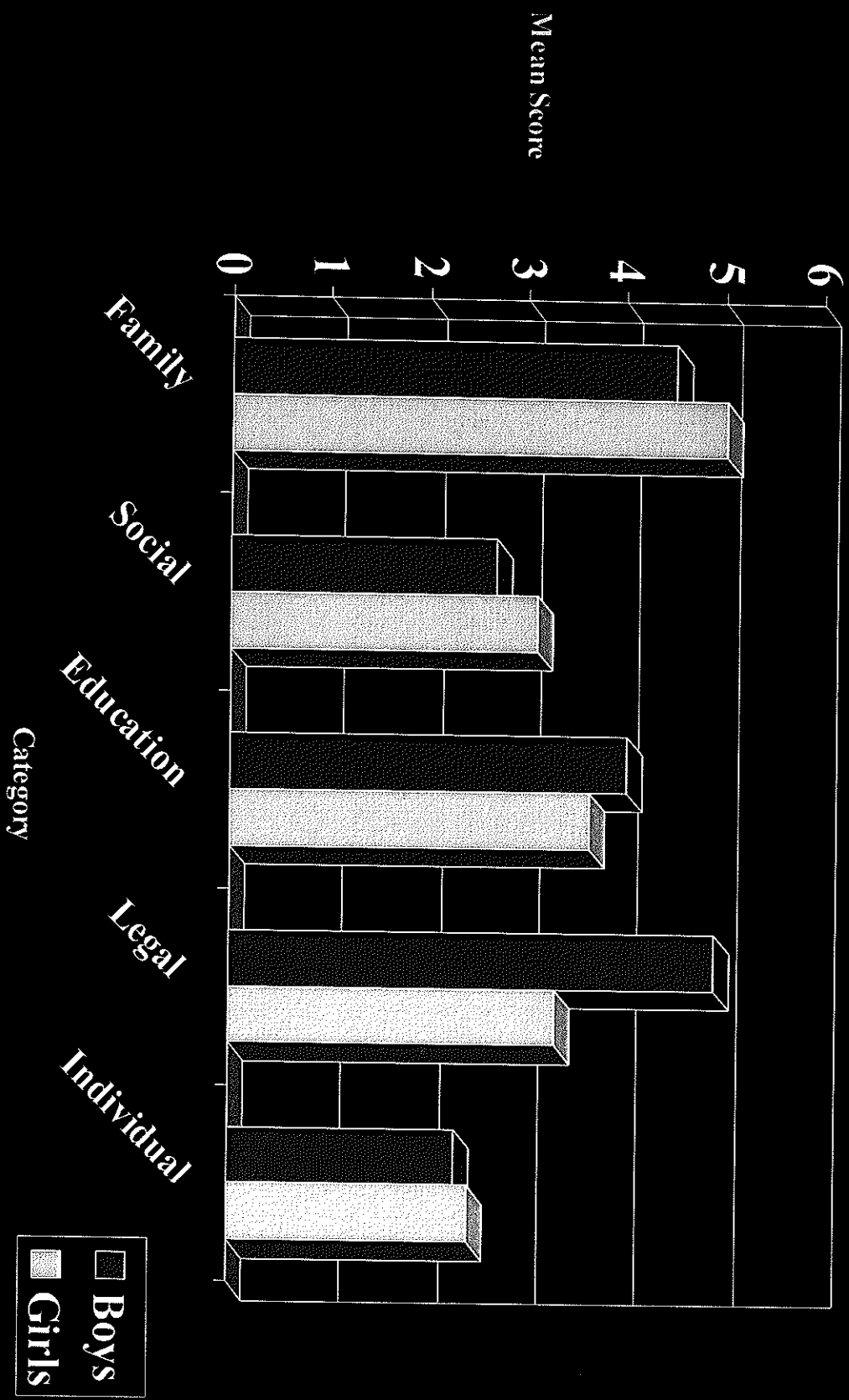
Personal (*n*=514)

	Ever Experienced	Level of Upset
	%	%
Death of animal	67	64
Ran away	46	28
Gained weight	34	40
Knew someone with HIV/AIDS	19	43

Personal Levels of Upset ($n=514$)



ESI Scores by Gender (n=512)



Results of FSI by Gender and Compared by Treatment (n=393) vs. Non-Treatment (n=119)

	Boys	Girls	¹ Significance
	Mean	Mean	
<u>Family Score</u>			
Treatment	4.63	5.54	0.000
Non-treatment	3.67	4.00	0.358
<u>Social Score</u>			
Treatment	2.84	3.61	0.000
Non-treatment	1.74	2.15	0.210
<u>Educational Score</u>			
Treatment	4.20	4.09	0.354
Non-treatment	3.10	3.00	0.698
<u>Legal Score</u>			
Treatment	5.24	4.08	0.000
Non-treatment	2.69	1.83	0.240
<u>Individual Score</u>			
Treatment	2.42	2.97	0.000
Non-treatment	1.46	1.61	0.447

Study 2: Traumatic Stress and Gender Differences in
Relationship to Substance Abuse, Mental Health,
Physical Health and HIV-risk Behavior

- 378 adolescents enrolled in four substance abuse treatment programs located in Arizona
- Participants were assessed at baseline, and at 3, 6, 9 and 12-month follow-up
- Assessments included the GAIN I and GAIN M-90 (Dennis, 1999)

GAIN Indexes Used for Analysis

- Traumatic Stress – 13 items
- General Mental Distress – 22 items
- Somatic Symptom – 4 items
- Depressive Symptom – 6 items
- Homicide / Suicide – 5 items
- Anxiety Symptom- 10 items
- Behavioral Complexity – 32 items
- Substance Problems 0 16 items
- Substance Issues – 8 items
- Health Distress – 10 items
- Number of Sex Partners; times had sex; proportion of protected sex – single items

Demographic Characteristics by Site

	<u>Site</u>			
	LC (169)	DC (43)	SC (79)	TSAT (87)
% Caucasian	37.9	45.6	55.8	46.0
% in custody of parents together	23.1	37.2	26.6	23.0
% marijuana substance of choice	65	87	74	63
% females	30	28	29	23
% reporting ≥ 4 symptoms on Traumatic Stress Index	54	35	48	41
Age (mean)	15.75	15.58	15.15	15.70

GLM Results for Substance Use Variables

F-ratios

Source	Substance Problems Lifetime	Substance Problems Past Year	Substance Issues Lifetime	Substance Issues Past Year
Site	2.87	6.68**	4.93*	9.15**
Gender (G)	21.52**	20.05**	16.14**	11.96**
TS (TS)	28.00**	29.57**	20.6**	22.12**
G x (TS)	2.00	0.24	6.79**	2.39

GLM Results for Mental Health Status Variables

F-ratios

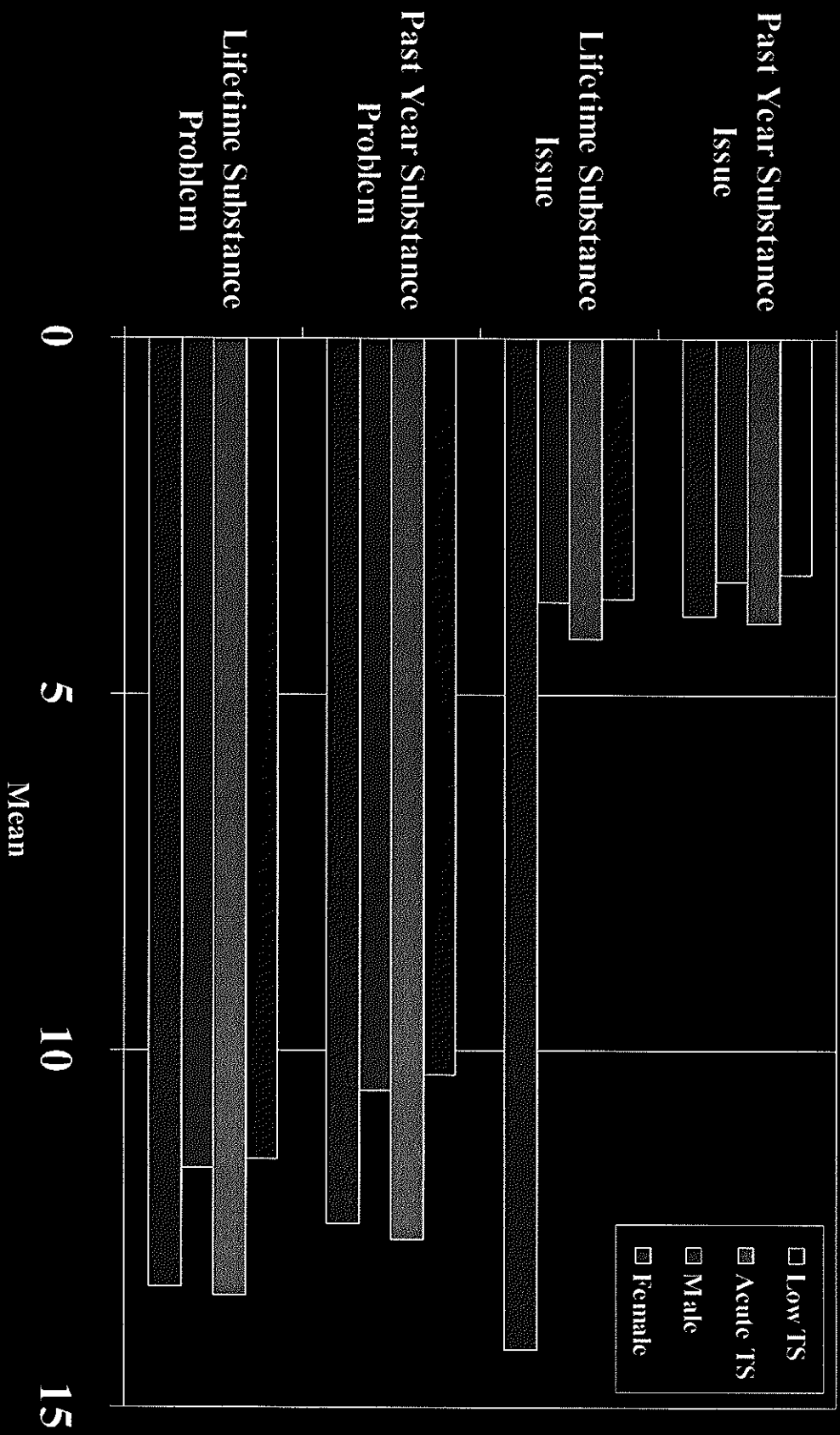
Source	GMDI	DSI	BCI	SSI	HSI	ASI
Site	21.73**	18.84**	0.87	11.41**	3.27	12.56**
Gender (G)	16.26**	17.39**	0.02	11.95**	5.40*	3.97*
TS (TS)	106.01**	75.99**	45.12**	58.77**	40.88**	59.20**
G x TS	.38	0.06	.98	0.12	4.02*	0.59

GLM Health, Sex and HIV-Risk Variables

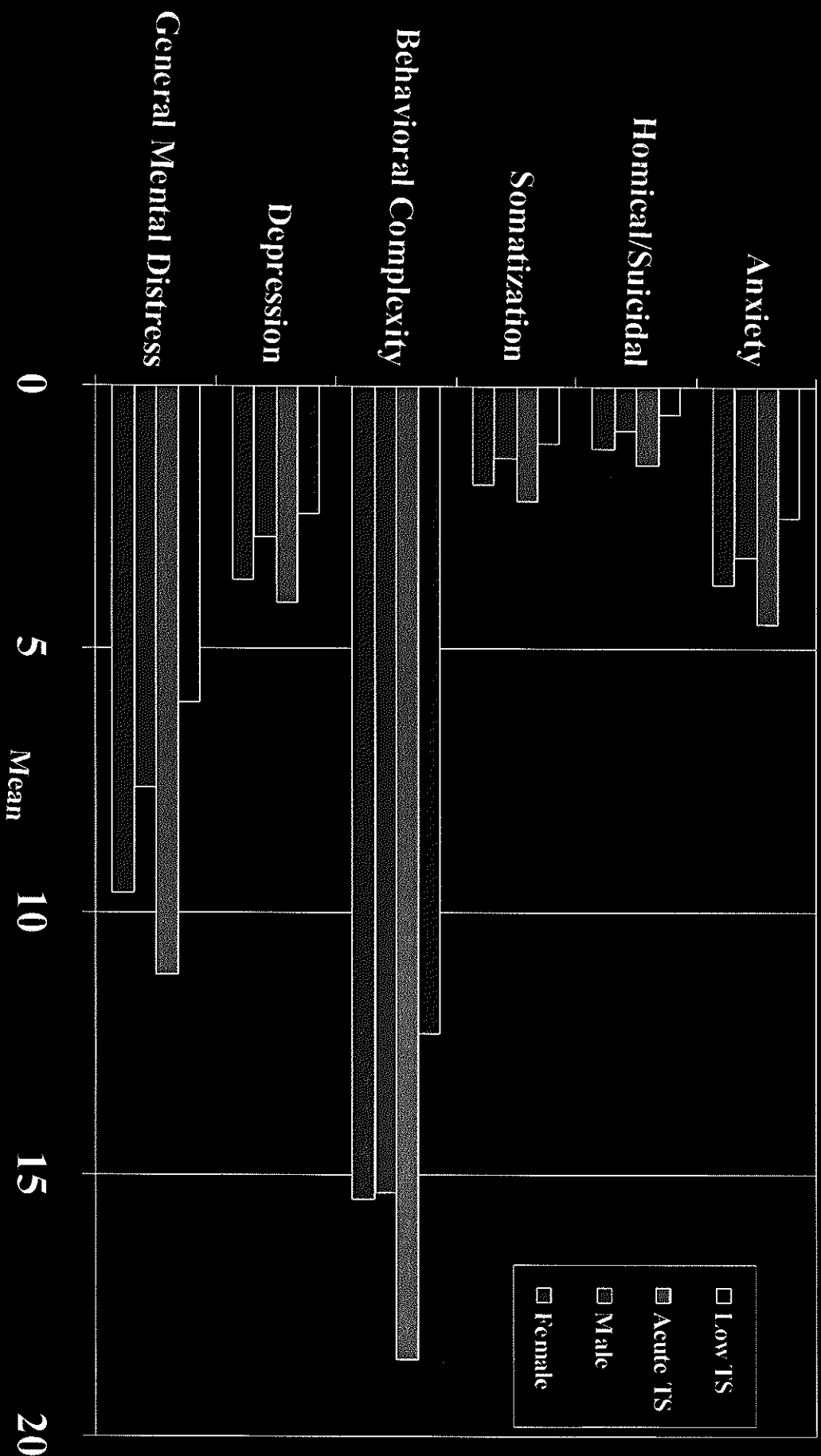
F-ratios

<i>Source</i>	<i>HDI</i>	<i>Sex Partners</i>	<i>Times had Sex</i>	<i>Proportion of Barrier Use ^a</i>
Site	0.83	0.88	0.5	0.26
Gender (G)	35.12**	0.48	4.61*	10.56**
TS (TS)	59.86**	3.68	4.25*	0.17
G x TS	0.29	0.76	1.33	0.18

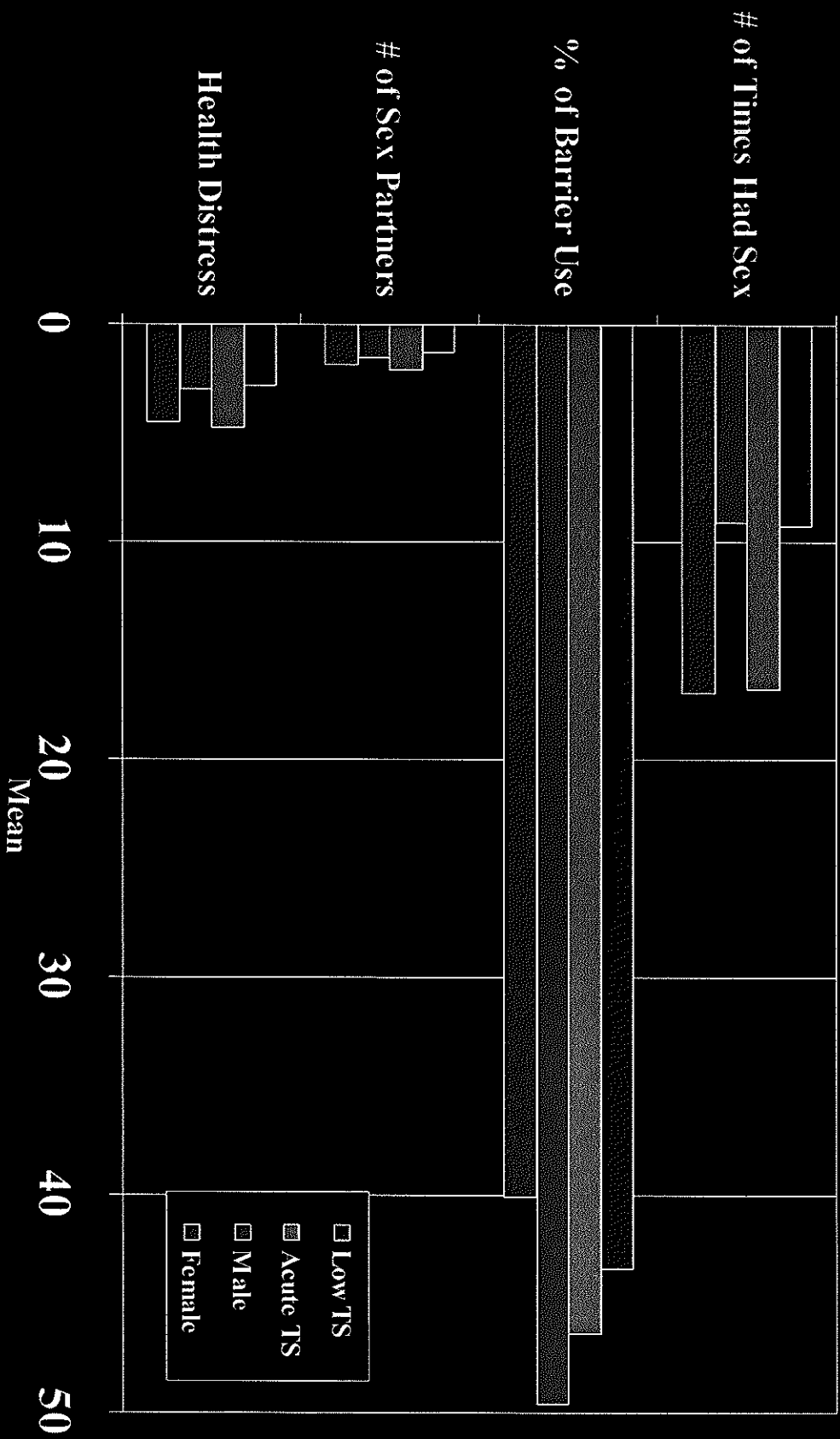
Substance Use



Mental Health



Health Issues



Recommendations for Treatment

- Screen for trauma at intake
- Treatment placement criteria should be, in part, based on level of trauma
- Develop and provide trauma sensitive treatment
- Increase follow-up period and include on-going assessment for trauma related symptoms
- Provide staff training

Summary

- A high percentage of adolescents enrolled in substance abuse treatment report trauma related events
- More females report past trauma as well as elevated levels of traumatic stress compared to males
- Females report different types (i.e., family, personal) of stress compared to males
- Traumatic stress is related to increased levels of substance use, mental health, physical health and HIV-risk behavior
- Males who experience acute traumatic stress present to treatment similar to females

Summary (continued)

- Treatment programs need to screen for trauma at intake and make placement decisions based in part on the trauma related assessment
- Appropriate trauma related interventions within substance abuse treatment need to be developed, implemented and researched
- Staff training on the intersection of substance use and trauma, the effects of trauma and how to address trauma within the treatment setting needs to be provided