

Musings on Epidemiology & Mental Health over the Last 40 Years

Kathy Magruder

1973-75 Sports

- * Dean Smith was the UNC coach
- * Mike Krzyzewski was in the Army & starting as Assistant Coach @ Indiana
- * Michael Jordan was 10
- * 1974 NC State National Champs



1973-75 Social

- * Gas crisis
- * No PCs!
- * Smoking was widely accepted
- * No mixed drinks in NC
- * Beer & wine consumed @ age 18



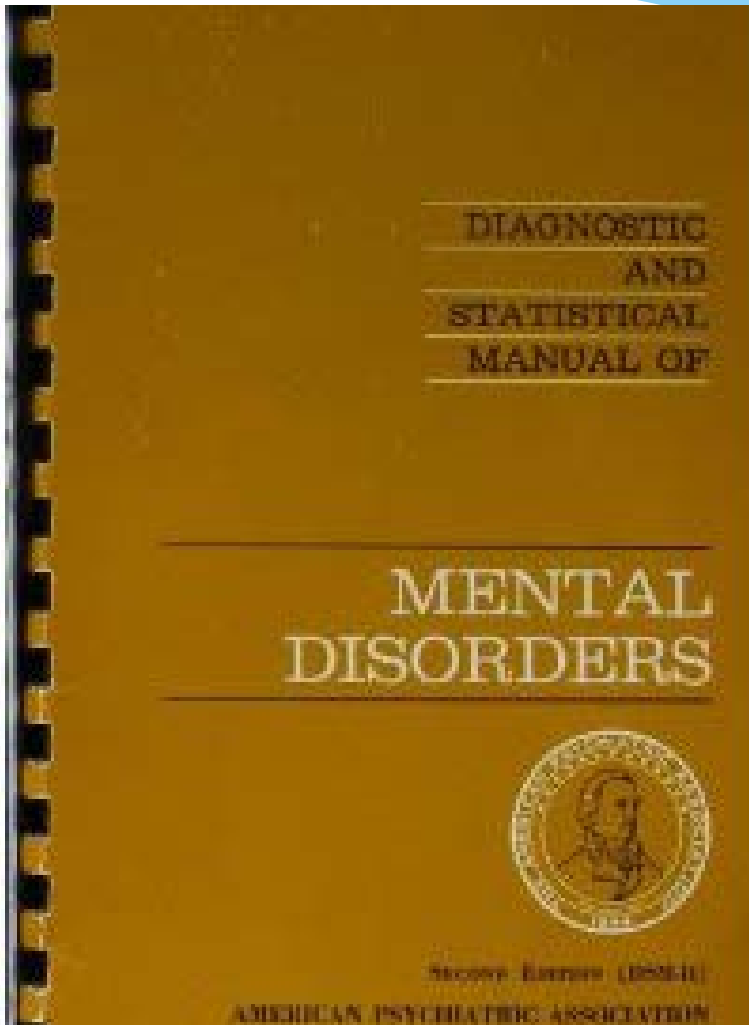
Alcohol in NC

- * NC counties were variable in alcohol availability
 - * Totally dry
 - * Only beer and/or wine
 - * Beer, wine, hard liquor available
- * Alcohol-related mortality
- * Both alcohol availability & % urban independently predicted alcohol-related mortality

Magruder KM. An epidemiologist study av sambandet mellan alcohol-dodlighet och legal tillgang till alkohol. *Alcohol och narkoticka*, April 1975.

Magruder KM. The association of alcoholism mortality with legal availability of alcoholic beverages. *Journal of Alcohol and Drug Education*, 21:(3) 27-37, 1976.

1973-75 Mental Health



- * DSM II (1968-80)
 - * Psychoanalytic theory
 - * Neurosis
 - * 1973 revision removed homosexuality
- * Rx
 - * Neuroleptics
 - * Tricyclics & MAOI
 - * Tranquilizers



FALL OF SAIGON
30 April 1975

Greetings from Vietnam!







War neurosis

Soldier's heart

Shell shock

Battle fatigue

Combat neurasthenia

Vent du boulet

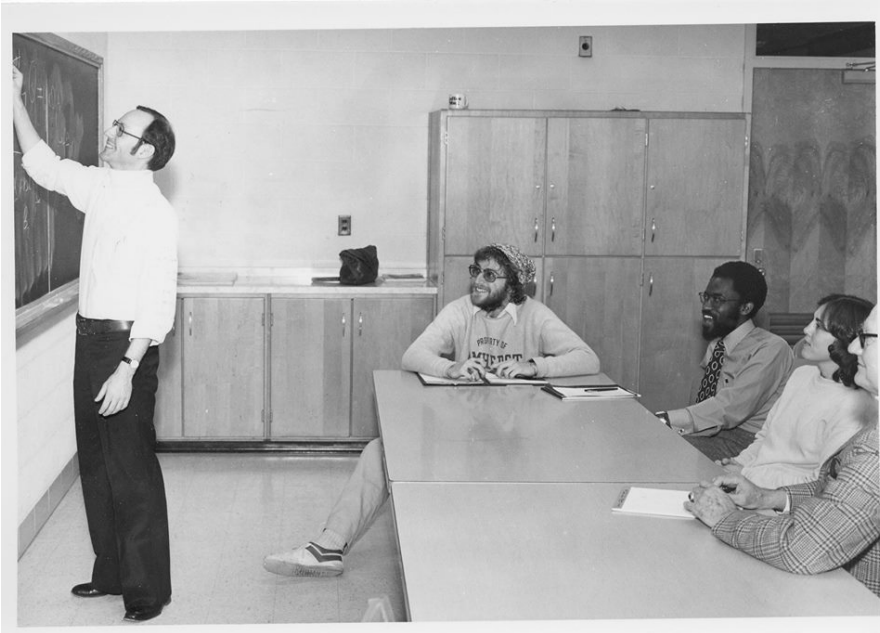
Traumatic neurosis

Jeff

Nha Trang, Vietnam



... back in Chapel Hill



- * Doctoral program with Bert Kaplan
- * Alcohol-related problems as a function of
 - * Availability
 - * Economics
 - * Social norms

1980's Sports



1982 UNC National Champs
1983 NC State National Champs



1980's Social



- * John died
- * Liquor by the drink was available in Chapel Hill
- * Drinking age returns to 21 by 1986
- * PCs, but no email

1980's Mental Health

- * Criterion based diagnoses
- * Lay interviewers
- * Psychiatric epidemiology to determine population prevalence
- * Post-traumatic stress disorder (PTSD) codified
- * 1987 FDA approved fluoxetine



ECA Findings

- * 28.1% annual prevalence of any mental disorder
- * <20% seek treatment
 - * 5.9% MH specialty care
 - * 6.4% general medical care
 - * 3.0% other human services
 - * 4.1% voluntary
- * Unclear if general medical providers recognized mental health problems
- * What kind of treatment was provided?
- * Effectiveness of treatment in general medical settings?

RCT to Improve Recognition & Treatment of Depression in GMC

- * Random feedback of + screening results
- * 12 month follow-up
- * Outcomes
 - * Recognition 56.2% vs. 34.6%
 - * Tx initiation 56.2% vs. 42.3%
- * Depression score
- * 100 patients with + depression screen
- * Recognition
- * Tx initiation
- * Patients did not improve!

Magruder-Habib KM, Zung WWK, & Feussner JR. Improving physicians' recognition and treatment of depression in general medical care: results of a randomized clinical trial. Medical Care, 28 (3) 239-250, 1990.

Magruder-Habib KM, Durand AM, & Frey KA. Alcohol abuse and alcoholism in primary health care settings. Journal of Family Practice, 32 (4) 406-413, 1991.

1990's NIMH

Primary Care

- * NIMH Primary Care Program
- * Guidelines for treating depression in primary care
- * Dx tools developed (e.g., PRIME-MD PHQ-9)

Mental Health

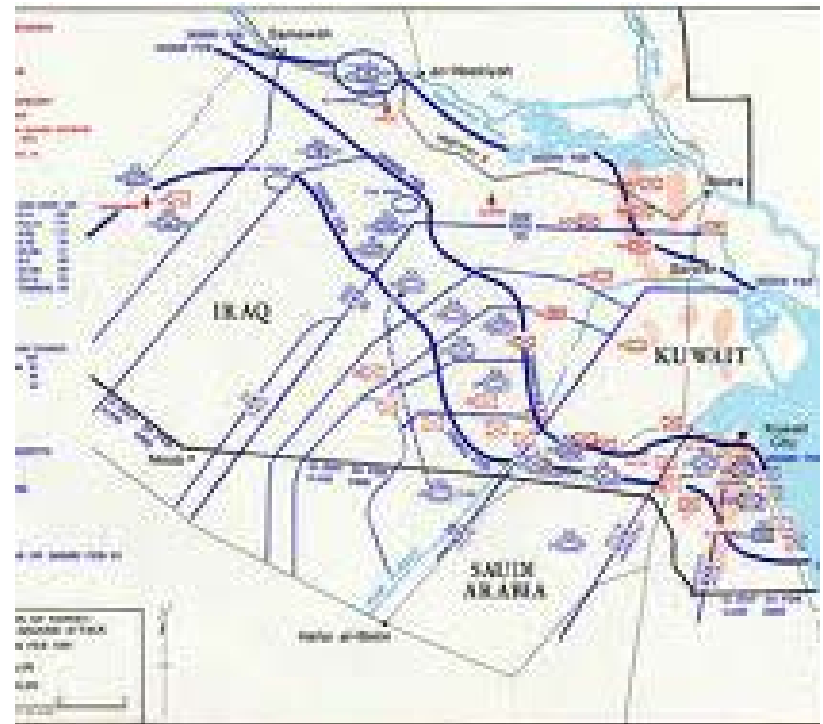
- * NIMH D/ART Program (Depression Awareness, Recognition, & Treatment)
- * Prozac
- * 1994 DSM IV

NVRS: Prevalence of PTSD & Partial PTSD Vietnam Theater Veterans

	PTSD		Partial PTSD	
	<i>Current</i>	<i>Lifetime</i>	<i>Current</i>	<i>Lifetime</i>
Male	15.2	30.9	11.1	22.5
Female	8.5	26.9	7.8	21.2

NVRS: Schlenger et al., 1992

Operation Desert Shield/Desert Storm (1990-91)



Sports



UNC

- * 1993 National Championship
- * 1997 Dean retired

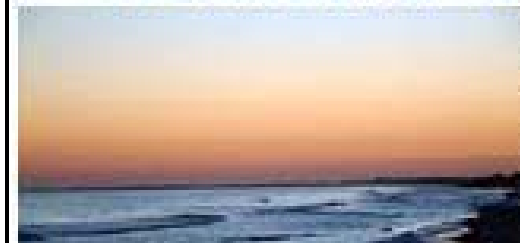
Duke

- * 1991 National Championship
- * 1992 National Championship

PTSD in Primary Care

Medical University of South Carolina

VA Medical Center



PTSD Findings VA Study

- * Multiple sites (4)
- * Patient interview & record review (~900)
- * 11.5% prevalence
 - * 46.5% identified by providers
 - * 46.7% used MH specialty services

Magruder KM, Albanese R, Frueh BC, & Arana GW. Posttraumatic Stress Disorder Detection and Management in Primary Care. *Journal of Clinical Outcomes Management* 2003; 10(10): 559-568

Magruder KM, Frueh BC, Knapp RG, Johnson MR, Vaughn JA III, Carson TC, Powell DA, & Hebert R. PTSD Symptoms, demographic characteristics, and functional status among veterans treated in VA Primary Care Clinics. *Journal of Traumatic Stress* 2004; 17 (4): 293-301

Magruder KM, Frueh BC, Knapp RG, Davis L, Hamner MB, Martin RH, Gold PB, & Arana GW. Prevalence of posttraumatic stress disorder in VA primary care clinics. *General Hospital Psychiatry*, 2005; Vol 27/3: 169-179

2000-2010

Social

- * 2001 George died

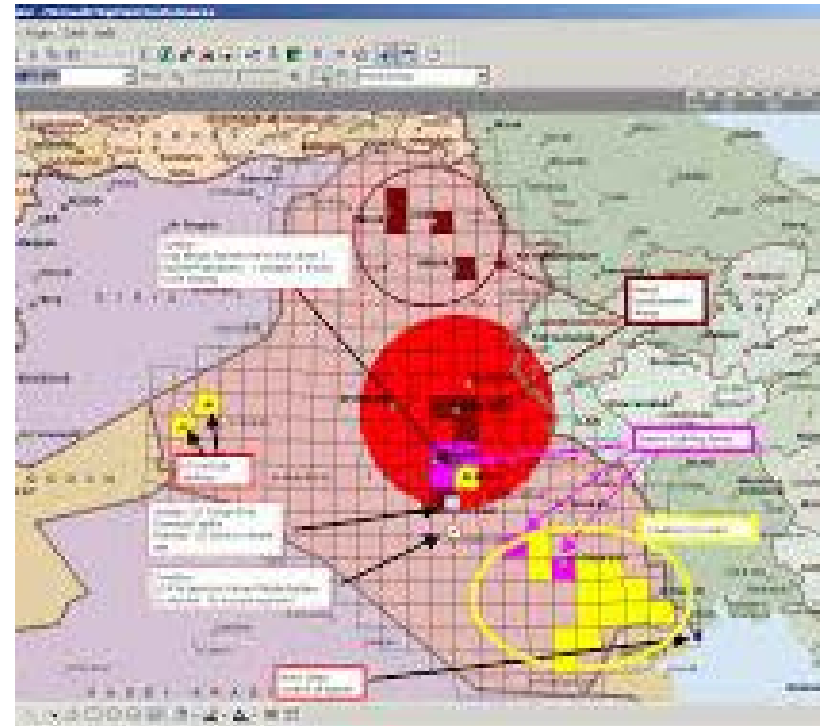


Sports

- * 2001 Duke National Champs
- * 2005 UNC National Champs
- * 2009 UNC National Champs
- * 2010 Duke National Champs

More Wars

- * 2001 – present
Afghanistan
- * 2003 – 11 Iraq
- * 2014 – present ISIL



Prevalence of Current & Lifetime PTSD by Vietnam Theater Service

Service in Theater

	Yes	Yes	No	No	
PTSD	%	95% CI	%	95% CI	p value
Lifetime	17.5	14.6 - 20.4	8.9	7.7 - 10.2	<.001
Current	12.8	10.0 - 15.6	5.7	4.6 - 6.7	<.001

Prevalence, Cis, and p values account for clustering by twin pair. Weighted for non-response and to the characteristics of the living male US population of VN era veterans

Goldberg J, Magruder KM, Forsberg CW, Friedman MJ, Litz BT, Vaccarino V, Heagerty PJ, Gleason TC, Huang GD, Smith NL. The course and consequences of posttraumatic stress disorder in Vietnam-era Veteran twins, Part 1: Current and lifetime prevalence (VA Cooperative Study #569). In review.

2012 PTSD in Male Vietnam Veterans: By 1992 Risk Group

Service in Theater

	Yes	Yes	Yes	Yes	No	No	No	No
	%	95% CI	RP	95% CI	%	95% CI	RP	95% CI
1992 PTSD risk grp								
Never	5.7	4.0-8.0	1.0		3.2	2.3-4.4	1.0	
Sub	11.6	7.8-16.9	2.0	1.2-3.4	10.7	6.8-16.3	3.3	1.9-5.7
Past	22.0	10.4-40.8	3.9	1.8-8.4	15.6	7.3-30.4	4.9	2.2-10.8
Current	33.7	23.9-45.1	5.9	3.7-9.4	23.5	13.3-38.0	7.3	3.9-14.0

Magruder KM, Goldberg J, Forsberg CW, MS; Friedman MJ, Litz BT, Vaccarino V, Heagerty PJ, Gleason TC, Huang GD, Smith NL. Long-term Trajectories of PTSD in Vietnam-era Veterans: VA CSP #569, The Course and Consequences of PTSD in Twins

Women's Wartime Exposure Scale

	Vietnam	Near VN	US
1. Sexual discrimination/ harrassment	50.6	50.2	48.6
2. Exposure to casualties (includes caring for enemy)	57.0	45.2	43.2
3. Performance	52.5	47.9	47.1
4. Dying	52.7	47.1	47.2
5. Danger/threat	55.0	46.7	45.4
6. Overwork	54.0	48.9	45.6

* Weighted using 2 tiered propensity cell method by locatability and response status

VN Women Veterans PTSD Prevalence by Service Area

	Vietnam		Near VN		US	
	%	95% CI	%	95% CI	%	95% CI
Lifetime	20.0	18.3 - 21.8	11.5	9.1 - 13.9	14.1	12.4 - 15.8
LT subthreshold	9.0	7.8 - 10.3	7.4	5.4 - 9.5	11.3	9.7 - 12.9
Current	15.9	14.3 - 17.5	8.1	6.0 - 10.2	9.1	7.7 - 10.5
Past	4.2	3.3 - 5.0	3.4	2.0 - 4.8	5.0	3.9 - 6.1

	Vietnam		Near VN		US	
Lifetime PTSD						
Pre-military trauma	2.9	2.2 - 3.7	2.9	1.7 - 4.2	5.0	3.9 - 6.1
Military or post military trauma	16.9	15.3 - 18.6	8.5	6.4 - 10.7	8.9	7.5 - 10.3

* Weighted using 2 tiered propensity cell method by locatability and response status

40+ years later

VA Cooperative
Studies Program

CSP # 579

Long Term
Health
Outcomes of
Women's
Service During
the Vietnam Era



***“The enemy was
on both sides.”***



Civilian Trauma Iraqi Students

Type of post-2003 event	Male (N=163)	Female (N=40)	Total (N=203)
	N (%)	N (%)	N (%)
PERSONAL TRAUMA			
Wounded	26 (16.0)	6 (15.0)	32 (15.8)
Risk of death or injury	99 (61.1)	25 (62.5)	124 (61.4)
Rape or sexual harassment	11 (6.8)	3 (7.5)	14 (7.0)
Kidnapped	16 (9.9)	2 (5.0)	18 (9.0)
Tortured	33 (20.6)	4 (10.0)	37 (18.5)
Arrested/jailed	39 (24.2)	1 (2.6)	40 (20.0)**
Being at the site of bombing	117 (73.1)	20 (50.0)	137 (68.5)**
Witnessing someone being wounded	110 (68.3)	14 (35.9)	124 (62.0)
Witnessing execution	92 (57.1)	12 (30.0)	104 (51.7)**
House target of bombing/shooting	46 (28.8)	12 (30.0)	58 (29.0)
School target of bombing/shooting	58 (36.3)	11 (27.5)	69 (34.5)
Going to bombed areas	112 (69.1)	14 (35.0)	126 (62.4)**
Held at gunpoint	64 (39.8)	6 (15.0)	70 (34.8)**

Iraqi Students

TRAUMA TO CLOSE ONES

Close one tortured	80 (50.0)	14 (35.0)	94 (47.0)
Close one arrested/jailed	79 (50.0)	10 (25.0)	89 (44.9)**
Close one kidnapped or lost	71 (44.1)	15 (37.5)	86 (42.8)
Close one killed	100 (61.3)	27 (67.5)	127 (62.6)
Close one raped or sexually harassed	9 (5.7)	2 (5.0)	11 (5.6)
Close one wounded	115 (71.0)	21 (55.3)	136 (68.0)

40 Years Lessons Learned

- * War not good for public health
- * Mentors & good teachers are important
 - * Joan Cornoni-Huntley
 - * Bert Kaplan
 - * Al Tyroler
- * Classmates
 - * Vic Schoenbach
- * Social support
- * SPH colleagues





Thank you!