

Mental Health Issues in Student-Athletes: Clinical Screening Implications and Prevalence Investigations

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Mental Health Issues in Collegiate Athletes

- ◉ Sport participation has been shown to both hinder and improve the mental health of athletes (Proctor & Boan-Lenzo, 2010; Storch et al., 2005)
 - ◉ Participating as a collegiate athlete may cause excessive stress from:
 - ◉ time constraints
 - ◉ other required academic/athletic related commitments
 - ◉ the transitional period of the first year of college
 - ◉ first collegiate sport season
 - ◉ high risk of injury in collegiate sports
- imbalance of pressures → anxiety, depression

(Yang et al., 2007; Brewer, 2001; Smith, 1996; Udry et al., 1997)



Depression in Athletes

- Minimal research on depression in student-athletes

- Reported prevalence: 10% to 26%

- utilizing various self-report depression symptom measures & methods

(Hammond, Gialloreto, Kubas, & Davis, 2013; McGuire, Ingram, Sachs, & Tierney, 2017; Nixdorf, Hautzinger, & Beckmann, 2013; Proctor & Boan-Lenzo, 2010; Storch, Storch, Killiany, & Roberti, 2005; Wolanin, Hong, Marks, Panchoo, & Gross, 2016; Yang et al., 2007)

- NATA & NCAA recommendation: screen collegiate student-athletes for mental health issues within preparticipation exams



(Neal et al., 2013)



(NCAA, 2016)

- Researchers have yet to validate any depression screening tool within a student-athlete population



PURPOSE

Validate the Patient Health Questionnaire-9 (PHQ-9) depression screening tool in collegiate student-athletes



Methodology

PPE Mental Health Screening:
PHQ-9
2 NCAA Division II Universities

- Identified red-flags
- Followed MH referral protocol

Random stratified
sampling technique:
Selected participants
for follow-up MINI
clinical interview

- Clinical neuropsychiatric interview = gold standard comparison
- MINI = validated brief standardized version

(Sheehan, 1998)

290 completed MINI
clinical interview

- Graduate MS Counseling, Social Work, School Counseling RAs
- Blind to PPE screening results

DEMOGRAPHICS

N = 881

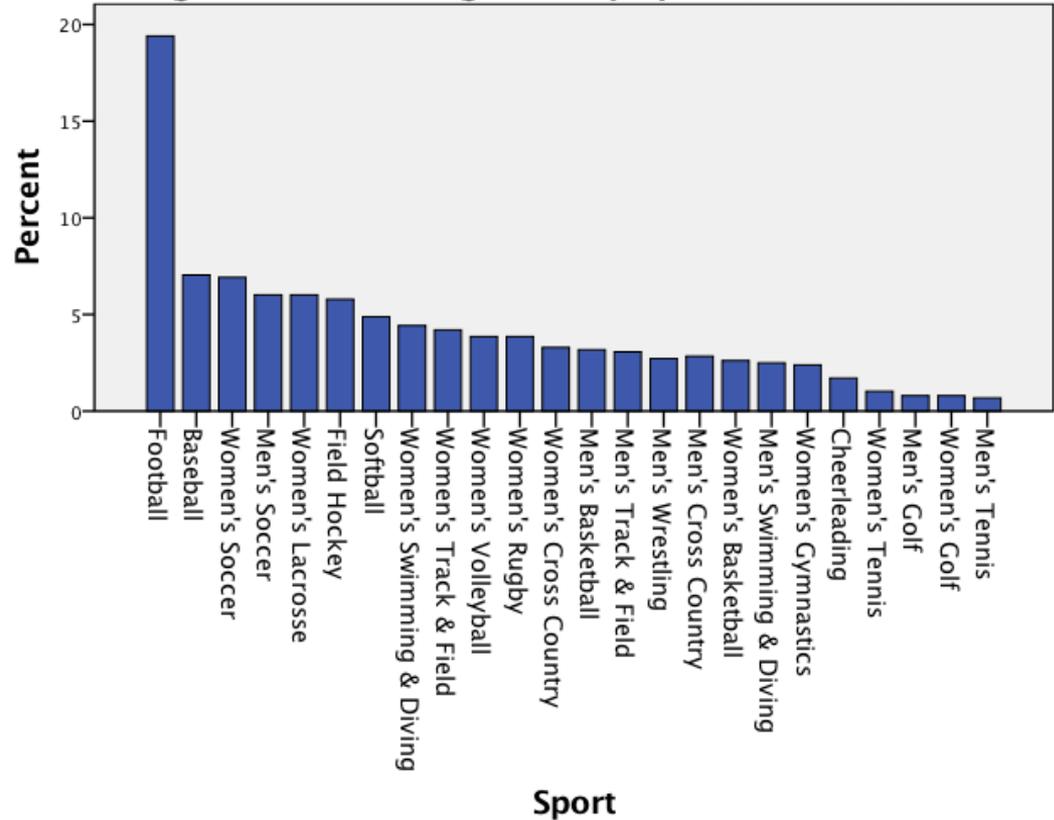
48.4%

Male

51.6%

Female

Figure 1. Percentage SAs by Sport (N = 881)



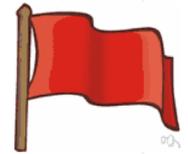
Results

PHQ-9 Symptoms <i>more than half the days + nearly every day</i>	N	%
Decreased interest / pleasure	32	3.7
Feeling down, depressed, hopeless	36	4.1
Sleep issues	86	9.7
Decreased energy	61	6.9
Poor appetite / overeating	54	6.2
Feeling bad about yourself	34	3.9
Trouble concentrating	41	4.7
Decreased movement/agitation	16	1.8
Suicidal ideation / self-harm*	5	0.6

**Suicidal ideation included several days*

PHQ-9 Depression Symptom Levels

	Level	n	%
0 →	None	412	46.8
1–4 →	Minimal	313	35.5
5–9 →	Mild	120	13.6
10–14 →	Moderate	25	2.8
15–19 →	Moderately-Severe	10	1.1
20–27 →	Severe	1	.1
	Total	881	100



4.0%
n = 36

MINI Results

MINIs **290**

age **19.8 ± 1.3** years

Met depression criteria

56.9%
females

18

N = 290

**18 met
depression
criteria**

Percentage of SAs by Sport

■ Total Participants ■ MINI Participants

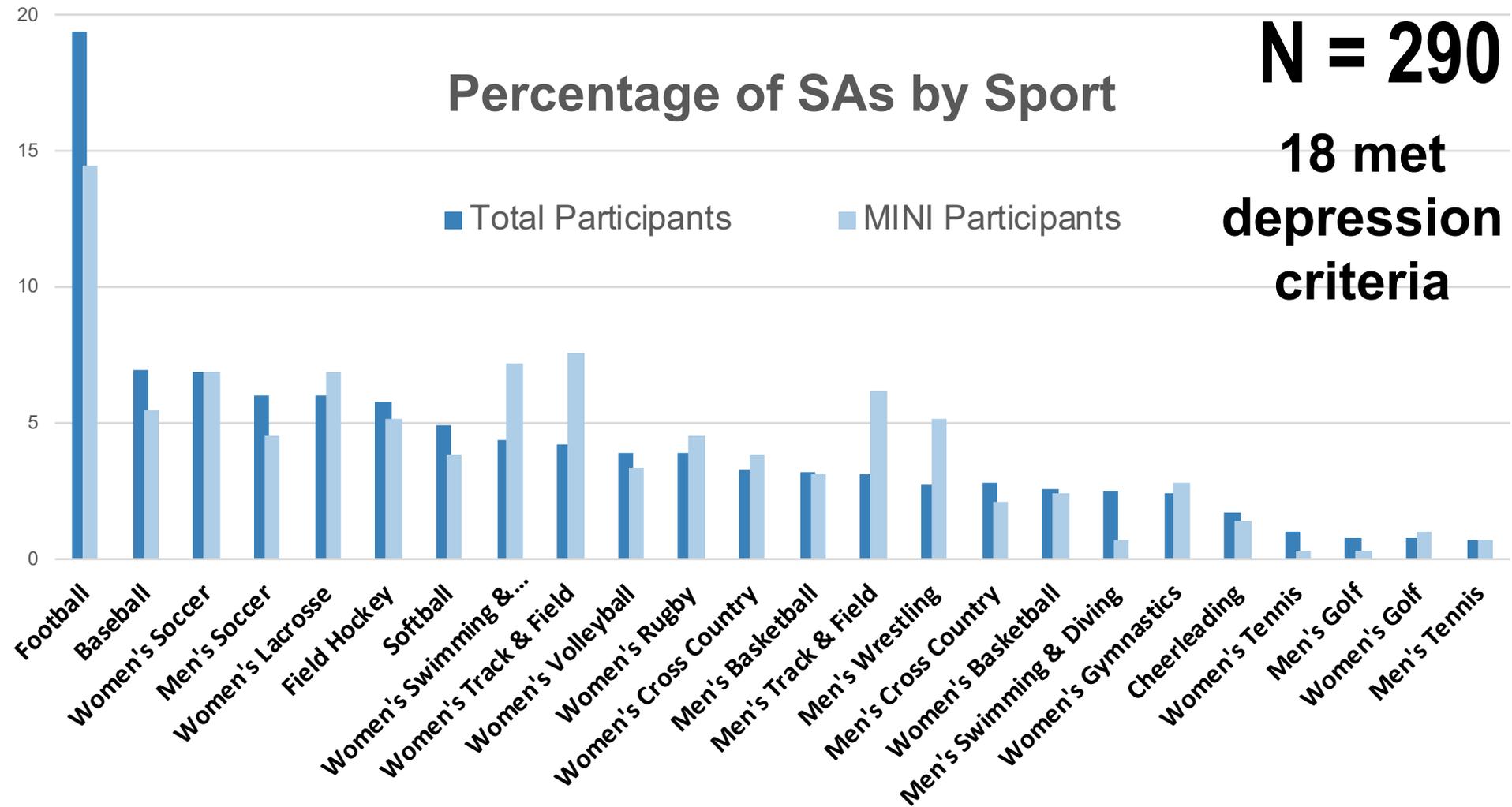


Figure 5. ROC Curve for the PHQ-9 vs. MINI

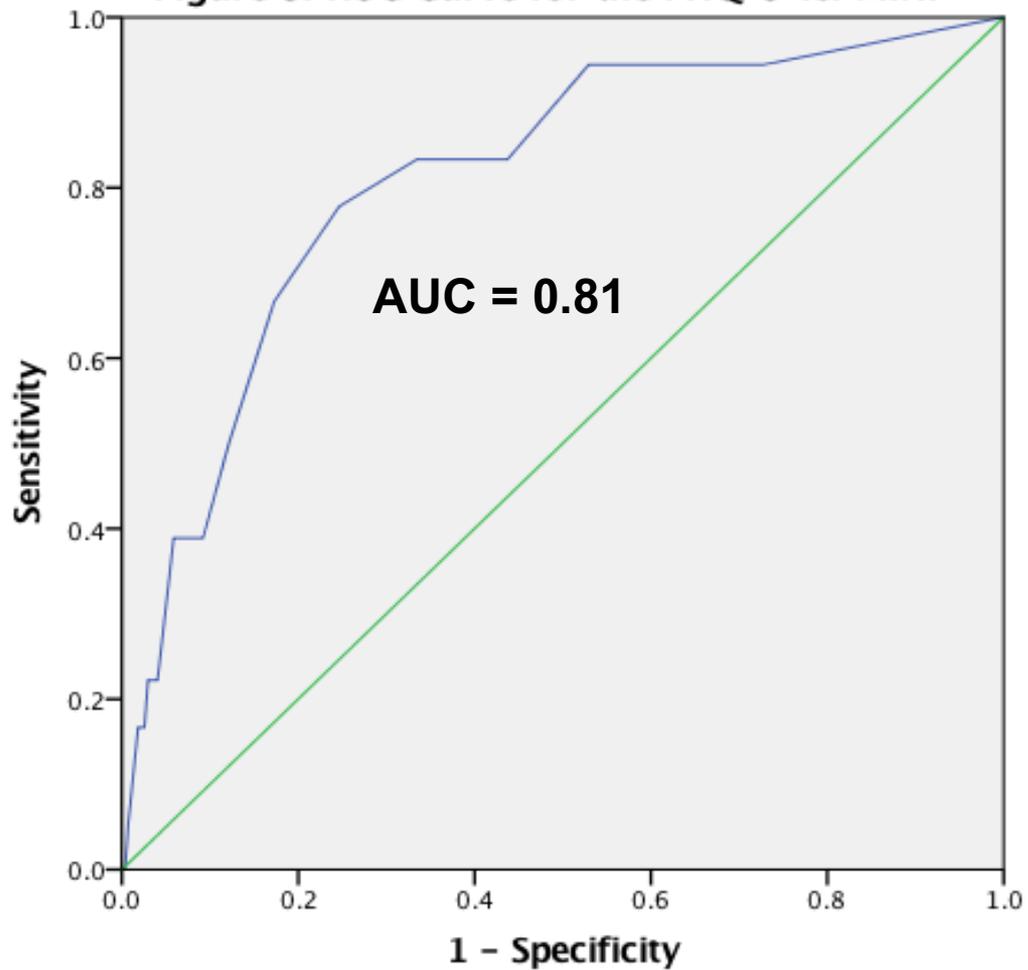


Table 6: Sensitivity, Specificity & Youden's J Results of the PHQ-9

Score	Sensitivity (%)	Specificity (%)	Youden's J
0	100	0	0
1	94.4	27.2	0.216
2	94.4	37.1	0.315
3	94.4	47.1	0.415
4	83.3	56.2	0.395
5	83.3	66.5	0.498
6	77.8	75.4	0.532
7	66.7	82.7	0.494
8	50	87.9	0.379
9	38.9	90.8	0.297
10	38.9	94.1	0.33
11	22.2	96	0.182
12	22.2	97.1	0.193
13	16.7	97.4	0.141
14	16.7	97.8	0.145
15	16.7	98.2	0.149
16	5.6	99.3	0.049
17	0	99.6	-0.004
18	0	1	0

 $J =$

sensitivity

+

specificity

- 1



Discussion

- ✓ Both PHQ-9 and CES-D well documented as valid measures in other populations (Kroenke, Spitzer, & Williams, 2001; Vilagut, Forero, Barbaglia, & Alonso, 2016)
 - Student-athletes
 - PHQ-9 for clinical screening
- ✓ Lower cut-off scores
 - Underreporting
 - Anonymous screening
 - Reluctance to report
 - Invisible injury
 - Stigma



Concussion underreporting

Kroshus, Kubzansky, Goldman, & Austin, 2015

Corrigan et al., 2006; Jones, Butryn, Furst, & Semerjian, 2013; Kamm, 2005

Crisis Text Line:
CONNECT to 741741

**National Suicide Prevention
Lifeline:**
1-800-273-8255

THANK YOU

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