

Epidemiological Assessment of Mental Health Screening Protocols for High School Athlete Participation in the United States, 2021

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INTRODUCTION:

The mental health of high school athletes is an escalating concern, with rates of adolescent depression and suicide on the rise nationwide. Despite the recognized protective factors of team sports participation, there exists a lack of standardization among mental health screening practices nationwide.

METHODS:

Our cross-sectional study utilized publicly available pre-participation forms from high school athletic associations to assess the extent of mental health screening in each state. We utilized a Likert scale to rate the quality of mental health screening, additionally noting measures of weight control behaviors and the use of the Patient-Health Questionnaire-4 (PHQ-4). Maps were created to compare screening practices across states. Data from the Youth Risk Behavior Surveillance System (YRBSS) measuring depression and self-harm behaviors among high school students were also collected. ANOVA and Chi-square tests analyzed associations between positive responses to depression and self-harm variables and the extent of mental health screening practices across states.

RESULTS:

We identified a wide range of mental health screening practices across the United States, ranging from no acknowledgment on pre-participation forms to required screening with possible referral or continual guidance. States with a higher extent of mental health screening were associated with lower rates of attempted suicide ($p < 0.001$) and suicide attempt resulting in injury ($p < 0.001$) among high school students. Utilization of questions on weight control behaviors was associated with lower rates of making a plan of how one would attempt suicide compared to states who pre-participation forms did not use them (86.0% vs. 86.2%, $p = 0.014$). Utilization of both the PHQ-4 and questions on weight control behaviors on pre-participation forms was associated with lower rates of attempted suicide compared to states that utilized neither (8.4% vs. 8.8%, $p < 0.001$).

DISCUSSION AND CONCLUSION:

High school student-athletes represent a critical demographic that is increasingly vulnerable to adolescent depression and suicide. Standardization should prioritize comprehensive evaluation and transparent communication to better equip schools in addressing mental health crises among student-athletes.

Figure 1. Map detailing mental health examination ratings based on high school athletics pre-participation form of each state.

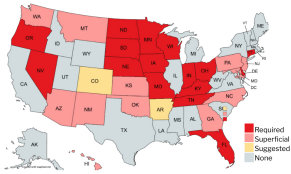
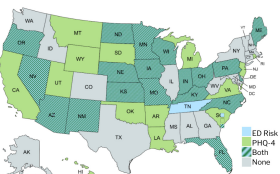


Figure 2. Map detailing the presence of PHQ-4 and/or ED risk questions within high school athletics pre-participation form of each state.



Variable	Rating					PHQ-4		ED Risk		Both	
	0	1	2	3	p-value*	Yes	No	Yes	No	Yes	No
Felt sad or hopeless	68.7%	67.7%	68.8%	67.9%	< 0.001	69.8%	68.6%	69.5%	68.0%	69.8%	67.8%
Seriously considered attempting suicide	82.80%	81.2%	80.80%	82.4%	< 0.001	83.7%	82.7%	82.8%	82.9%	83.3%	82.8%
Made a plan about how they would attempt suicide	85.90%	84.3%	85.4%	85.4%	< 0.001	87.0%	86.0%	86.0%	86.2%	86.6%	86.1%
Actually attempted suicide	8.80%	9.8%	9.1%	9.1%	< 0.001	8.0%	8.0%	8.4%	8.8%	8.4%	8.8%
Suicide attempt resulted in an injury, poisoning, or overdose that had to be treated by a doctor or nurse	2.90%	3.3%	3.0%	3.0%	0.024	2.6%	2.6%	2.9%	2.8%	2.7%	2.8%

*Significant if $p < 0.05$. Compared to rating of 0 (no mental health screenings).