
Family Practice Forum

Psychological Trauma in Children and Youth in Competitive Sports

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The role of competitive sports in the development of the child or youth is a subject of ongoing debate. The possibility of physical and psychological trauma both figure prominently in the arguments of those who condemn programs that introduce young people to the stresses of competition.

A host of injuries have been identified as peculiar to the juvenile associated with sports such as baseball, football, and wrestling. Yet the absence of studies that demonstrate significantly higher injury rates in athletes in competitive sports compared with youngsters in noncompetitive activities diminishes the argument that physical trauma in competitive sports is great enough to preclude participation by the child or youth.¹

This last statement is not to suggest complacency regarding physical trauma in competitive sports, for much remains to be done in the areas of preparticipation health evaluation of athletes, as

well as sports injury prevention, diagnosis, and rehabilitation.^{1,2}

Although many feel that physical trauma cannot be implicated as a significant deterrent to sports competition for young people, a body of knowledge does suggest certain youths are highly vulnerable to psychological trauma and its consequences, and their participation in competitive sports needs to be carefully monitored.³

Sports Competition—A Stressful Life Event

Participation in competitive sports is an anxiety producing experience, and thus may be labeled a stressful life event.⁴ Coddington's interest in psychological trauma in children led him to modify the life event items of Holmes and Rahe,^{5,6} to make them more compatible with the life experiences of children.^{7,8} Although no item on Coddington's life event list deals specifically with athletic activity, one item may be correlated with competitive sports experience—"Not making an extracurricular activity he or she wanted (eg, athletic team)."

How important is it to a junior or senior high school student to fail to make an extracurricular activity such as an athletic team? According to Coddington's study, this life event rated above experiences such as death of a grandparent, suspension from school, and loss of a job by a parent.

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Coddington's findings imply that the impact of sports competition on the youth or child has the potential for producing severe stress and associated high levels of anxiety. Specialists in sports medicine and health education have expressed concern for the anxiety ridden child or youth, for not only is athletic performance impaired by high levels of anxiety,³ but when acute anxiety is reinforced by repeated failures and becomes chronic, psychophysiological changes may be induced that result in illness and injury.⁷⁻⁹

The correlation between a youth's anxiety and athletic competition has been shown in a number of studies. Sonstroem¹⁰ established that "self-perceptions of physical ability are positively related to athletic experience. . . ." Furthermore, "self-perceptions of physical ability are positively related to global self-esteem." In a study of boys (ages 11 and 12), Scanlan and Passer¹¹ were able to demonstrate that, in general, individuals with the highest levels of anxiety were those who had a pre-game low self-esteem and low performance expectancy. The state of anxiety was significantly compounded when these individuals were part of a losing team.

Identification and Management of the Vulnerable Child-Youth

Which young people are most likely to experience repeated failure and suffer the psychological trauma of high levels of anxiety in sports competition? Two groups may be identified:

Group 1: those who demonstrate a low level of competence, relative to their peer group, due to inexperience, lack of innate ability, or late maturation.¹²⁻¹⁴

Group 2: those who perceive that they are not meeting the expectations of their peer group, coach, or parents.¹²⁻¹⁴

Children in Group 1 who lack competence due to the absence of experience respond remarkably well to proper coaching. The response to coaching is influenced in large part by the child's or youth's psychological, physical, and intellectual potential. The capable coach will recognize the innate abilities of the young athlete and will also recognize that the child or youth who fails at one sport (eg, a

hand-eye coordination activity such as baseball) may excel in another (eg, an endurance sport such as running or biking).

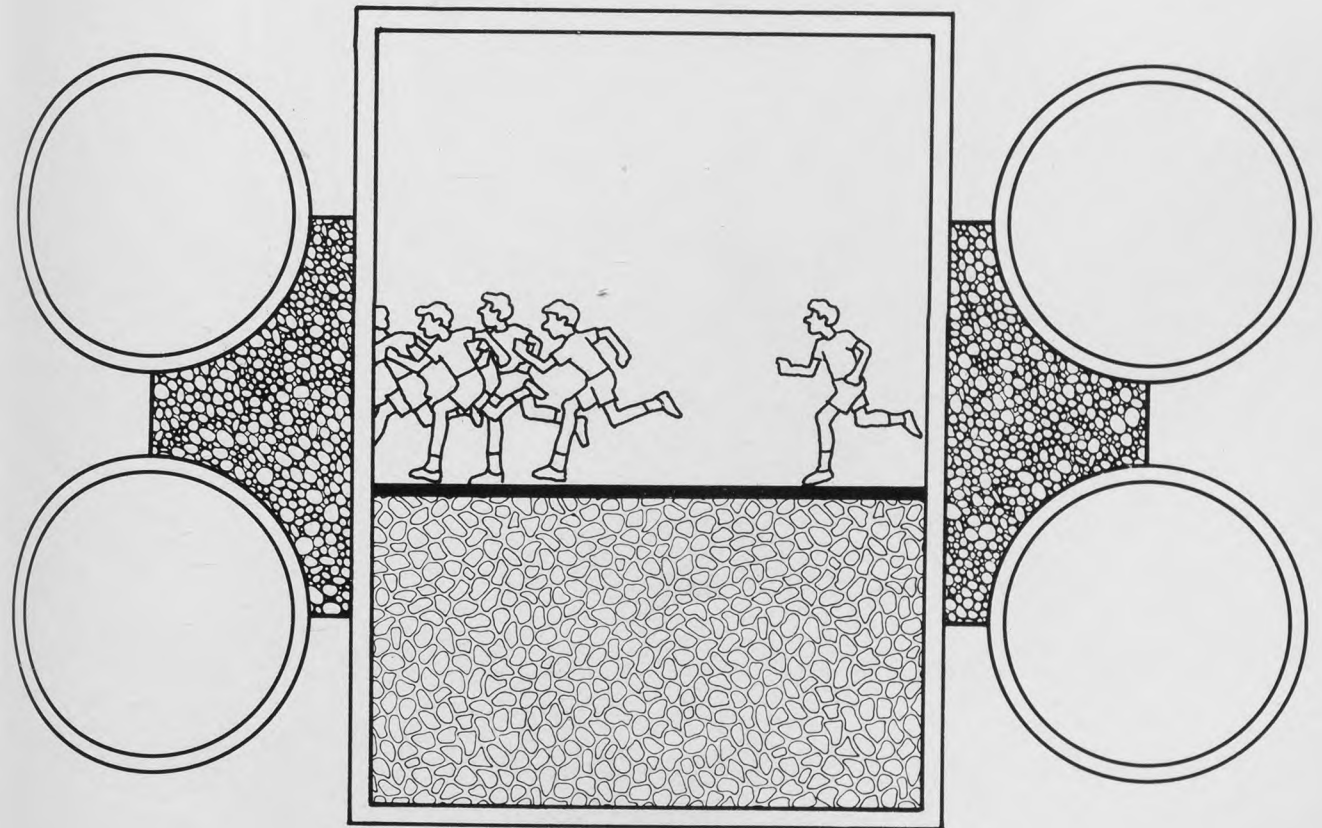
Maturation of the child or youth is also a determinant in sports competition that deserves analysis. Numerous studies have been carried out to establish the child's or youth's skeletal or physiological maturation based on examination of pubic hair, penis size, testicle size, facial hair distribution, breast development, and menarche.^{15,16} New York State's SCAM study,¹⁷ which was initiated in 1973, examines physical and psychological factors in youths who have been matched for maturation and ability. Preliminary information suggests merit in programing high school students by maturational levels. Other studies by Mussen^{18,19} and Tanner¹⁶ have already identified psychological trauma as a consequence of competition between maturationally mismatched youths.

The child or youth who fails in competitive sports because of limited ability may be trained to competence or switched to an age level or sports activity in which success may be realized, while the slow maturer may be assigned to an appropriate peer group. However, a much more complex solution is required to assist the young athletes who perceive that they are not meeting the expectations of their peers, coaches, or parents. The child or youth in such a milieu not only carries the weight of personal wishes to succeed, but the additional burden of peers, coaches, parents, and community members who wish to be vicarious winners. Some athletes thrive in such an environment, but many more become the psychologically traumatized victims of a system that demands more than the young athlete may be able to give.

Individuals who are concerned with the physical and psychological health of youth will support community athletic programs that improve the participant's physical fitness and self-image. Guidance in developing such programs may be found in the work of Smith and Smoll.^{3,20,21} They achieved significant success in a Little League coach stress management training program that focused on improving communication between coach and player, and on establishing more humane goals for the competitors. The concepts of stress management and coach effectiveness training that were evolved in this University of Washington study deserve broad application. The audience should include both coaches and parents.

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Before prescribing, please consult complete product information, a summary of which follows:

Indications: In adults, urinary tract infections complicated by pain (primarily cystitis, pyelitis and pyelonephritis) due to susceptible organisms (usually *E. coli*, *Klebsiella-Aerobacter*, *Staphylococcus aureus*, *Proteus mirabilis*, and, less frequently, *Proteus vulgaris*) in the absence of obstructive uropathy or foreign bodies.

Important Note: Carefully coordinate *in vitro* sulfonamide sensitivity tests with bacteriologic and clinical response. Add aminobenzoic acid to culture media for patients already taking sulfonamides. Increasing frequency of resistant organisms currently is a limitation of the usefulness of antibacterial agents including the sulfonamides. Blood levels should be measured in patients receiving sulfonamides for serious infections, since there may be wide variations with identical doses; 12 to 15 mg/100 ml is considered optimal for serious infections; 20 mg/100 ml should be the maximum total sulfonamide level, as adverse reactions occur more frequently above this level.

Contraindications: Children below age 12; sulfonamide hypersensitivity; pregnancy at term and during nursing period. Contraindicated in glomerulonephritis, severe hepatitis, uremia, and pyelonephritis of pregnancy with gastrointestinal disturbances, because of phenazopyridine HCl component.

Warnings: Safe use in pregnancy has not been established. Teratogenicity potential has not been thoroughly investigated. Deaths from hypersensitivity reactions, agranulocytosis, aplastic anemia and other blood dyscrasias have been reported; clinical signs such as sore throat, fever, pallor, purpura or jaundice may be early indications of serious blood disorders. Complete blood counts and urinalysis with careful microscopic examination should be performed frequently during sulfonamide therapy.

Precautions: Use with caution in patients with impaired renal or hepatic function, severe allergy, bronchial asthma and in glucose-6-phosphate dehydrogenase-deficient individuals. In the latter, hemolysis may occur. Maintain adequate fluid intake to prevent crystalluria and stone formation.

Adverse Reactions: *Blood dyscrasias:* Agranulocytosis, aplastic anemia, thrombocytopenia, leukopenia, hemolytic anemia, purpura, hypoprothrombinemia and methemoglobinemia. *Allergic reactions:* Erythema multiforme (Stevens-Johnson syndrome), skin eruptions, epidermal necrolysis, urticaria, serum sickness, pruritus, exfoliative dermatitis, anaphylactoid reactions, periorbital edema conjunctival and scleral injection, photosensitization, arthralgia and allergic myocarditis. *Gastrointestinal reactions:* Nausea, emesis, abdominal pains, hepatitis, diarrhea, anorexia, pancreatitis and stomatitis. *C.N.S. reactions:* Headache, peripheral neuritis, mental depression, convulsions, ataxia, hallucinations, tinnitus, vertigo and insomnia. *Miscellaneous reactions:* Drug fever, chills, toxic nephrosis with oliguria and anuria, polyarteritis nodosa and L.E. phenomenon. Due to certain chemical similarities with some goitrogens, diuretics (acetazolamide and thiazides) and oral hypoglycemic agents, sulfonamides have caused rare instances of goiter production, diuresis and hypoglycemia. Cross-sensitivity with these agents may exist.

Dosage: Usual adult dosage for acute, painful phase of urinary tract infections is 4 to 6 tablets initially, then 2 tablets four times daily for up to 3 days. If pain persists, causes other than infection should be sought. After relief of pain has been obtained, continued treatment of the infection with Gantrisin (sulfisoxazole) may be considered.

NOTE: Patients should be told that the orange-red dye (phenazopyridine HCl) will color the urine soon after ingestion.

How Supplied: Tablets, each containing 0.5 Gm sulfisoxazole and 50 mg phenazopyridine HCl—bottles of 100 and 500.

LETTERS TO THE EDITOR

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with a similar task force in the Society of Teachers of Family Medicine, which has just begun to deal with these issues on a national basis. Dr. Leaman's article is most helpful in giving us an appreciation for what has happened as we plan for the future.

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Classification of Homosexuality

To the Editor:

It is extremely encouraging to me that researchers are attempting to look at non-psychiatrists' identification of emotional and behavioral disorders. The recent article in *The Journal of Family Practice* on Recognition of Depression in a University-Based Family Medicine Residency Program (Reifler BV, Okimoto JT, Heidrich FE, et al: *J Fam Pract* 9:623, 1979) reinforced the importance of utilizing a workable diagnostic criteria for determining the prevalence of depression among those patients seen by family physicians. However, the diagnostic criteria stated in Figure 1 of the article (p 624) were outdated in designating "homosexuality" as a "pre-existing psychiatric condition."

Homosexuality is *not* a psychiatric condition and is *not* linked with "other sexual deviations," as shown by the Diagnostic and Statistical Manual III (DSM-III), published by the American Psychiatric Association, Washington, DC).

Though I recognize the source of

these criteria was published in 1974 (Woodruff RA, Goodwin DW, Guse SC: *Psychiatric Diagnosis*, New York, Oxford University Press), it is important to emphasize that psychiatric criteria and treatment change, and physicians need to keep pace with these changes in order to make accurate diagnoses.

Special thanks need to be extended to *The Journal of Family Practice* for publishing articles such as this one that promote a working relationship between medicine and psychiatry.

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The preceding letter was referred to Dr. Reifler who responds as follows:

Thank you for allowing me to respond to Ms. Hine's letter. She has correctly pointed out that defining homosexuality as a psychiatric condition has come under very close scrutiny and many authorities feel it should not be identified as such. While we do not wish to enter into this debate, her point is a good one. To clarify how we used the diagnostic criteria, we would like to note that presence or absence of homosexuality was not specifically inquired about by the interviewers, nor was any mention of homosexuality by a patient used as a criterion establishing the presence or absence of depression.

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