

Anxiety in Elite Young Gymnasts: Part II – Sources of Stress

Joan L. Duda, Ph.D.

Lori Gano-Overway, M.S.

Purdue University

Part I of this series (*Technique*, March 1996) revealed that young, talented gymnasts define stress as a negative response manifested in their bodies, thoughts, feelings as well as in terms of the situation in which they find themselves. These personal definitions of anxiety clearly indicated that stress diminishes the quality of their gymnastics experience.

As the stress response is a result of a perceptual process, we need to know what gymnasts *perceive* to be causing them to feel anxious if we hope to decrease the frequency and intensity of stress in gymnastics (and foster the occurrence of relaxation states). Sport psychology research on the antecedents of stress have revealed the following sources:

1. low perceived mental and physical readiness
2. high levels of fatigue
3. others' high expectations
4. fear of failure and/or making a mistake
5. the perceived importance of the competition
6. an overemphasis on outcome
7. fear of negative evaluation
8. forced participation in the activity at hand

(Cohn, 1990; Gould, Petlichkoff, and Weinberg, 1984; Jones, Swain, and Cale, 1990; Passer, 1983; Scanlan and Lewthwaite, 1984).

The studies to date, however, have focused primarily on older and often male athletes. With respect to the former, sometimes coaches and parents erroneously believe that younger sport participants do not find the athletic realm stressful. It is the purpose of this article to examine what young, elite female gymnasts perceive to be the determinants of their heightened anxiety.

Method

Seventy-five female members of the 1993-1994 TOPs National Team between the ages of 9 and 12 (mean age was 9.98 years) were administered a multi-section questionnaire by the first author at a National Camp. The gymnasts were encouraged to answer honestly and in their own words. They were assured that their responses would be kept confidential and that only the group-based findings would be reported. The inventory comprised a number of questions dealing with stress. Specific to the perceived sources of stress, the gymnasts were asked to answer the following questions: "In your gymnastics, what do you find most stressful? What makes you feel really nervous?"

Responses were reviewed by the two researchers and placed into thematic categories to determine the perceived causes of stress for the gymnasts as a group. The frequency of responses classified in each category was then calculated.

Results

As shown in Table 1, several sources of stress were revealed by the gymnasts and were categorized into eight broad thematic areas:

1. Performance of skills
2. Fear of evaluation
3. Aspects of competition
4. Fear of making mistakes
5. Expectations from self and others
6. Time pressures
7. Environmental conditions
8. Fear of injury.

Examples of typical responses which were classified in each of these categories are provided.

Table 1: Sources of Stress Among Young Gymnasts

Source of Stress	Definitions of Source of Stress	Exemplary Quotes from Gymnasts
Performance of Skills (38%)	<i>Apprehension associated with performing skills involving learning new skills, performing a difficult or scary skill or doing skills for the first time in a meet.</i>	<p>I feel stress "falling off the beam and doing new, scary skills."</p> <p>I feel stress "when I do a series on beam, round offs, double backs, hurting myself, facing a Tsuk, over rotating a fly-away."</p> <p>I feel stress "trying something new or doing something you've never done in a meet."</p> <p>I feel stress "learning a new skill on any event and when you are in a meet."</p>
Fear of Evaluation (25.7%)	<i>Being watched and evaluated by any number of individuals such as parents, judges, coaches, or famous people. Specific behaviors and responses by others which portrayed negative evaluation were also included</i>	<p>I feel stress "when all of these people are watching you, other people who are better than you, judges watching your every move."</p> <p>I feel stress "being in front of judges, people video taping me, and I'm afraid I'll mess up and embarrass myself."</p>
Aspects of Competition (14%)	<i>Being in a competitive environment and/or</i>	I feel stress "when I get nervous...at meets. It's because everybody's watching you and there are judges."

	<i>competing in meets (especially those deemed as important).</i>	<p>I feel stress "when I try my hardest and my coach says I'm doing bad."</p> <p>I feel stress at "...a very big meet and you know that your biggest competitor is there."</p> <p>"Some things that make me nervous are going to meets."</p>
Making Mistakes (4.1%)	<i>Responses associated with making errors, worrying that a mistake may be made or continually not doing a trick correct.</i>	<p>"I get nervous whenever I have a meet or when during warm-ups you fall a lot and you're afraid that you'll fall during the meet."</p> <p>I feel stress "when I make it through my routine and when it comes to my dismount and I miss it. I'm very upset and it is stressful."</p> <p>"I get stressed when I work over and over on something and just don't do it right."</p>
Expectations from Self and Others (4.1%)	<i>Feelings of anxiety associated with the perception that one must perform well based on self-induced pressure or pressure from others.</i>	<p>I feel stress "when my coach puts pressure on me. Like if you don't do it, you can't go to the meet."</p> <p>I feel stress "when your coach is depending on you to win."</p> <p>I feel stress "when people make you feel like you must make the skill or get a better score than everyone else."</p> <p>I feel stress "when you have to do something you don't want to do."</p>
Time Pressures (3.5%)	<i>Stress due to waiting or the passage of time such as not feeling ready to perform before the start of a competition, waiting for a salute from the judges, rushing through timed warm-ups, or waiting to compete after a delay.</i>	<p>I feel stress "rushing in timed warm-ups."</p> <p>I feel stress "when you go to a meet and are not ready for something."</p> <p>I feel stress "if a judge takes a very long time before saluting."</p>
Fear of Injury (2.9%)	<i>A fear of being hurt or injured during a</i>	"Stressful = doing a new trick and thinking you're going to kill yourself."

	<i>competitive event.</i>	I feel stress "when I'm jumping to the high bar, because that's how I broke my elbow."
Environmental Conditions (1.8%)	<i>Aspects of the physical environment or apparatus which made the gymnast nervous.</i>	"I get nervous when the bars are slippery...if the floor is hard..."

Discussion

Since being anxious is a consequence of one's perceptions, identification of an athlete's personal determinants of anxiety is the first step to helping her effectively deal with stress. With respect to the present sample of young TOPs gymnasts, it is important to note that this age and level of competitor had no trouble indicating what made her nervous in gymnastics. The major sources of stress among members of our TOPs National Team were performing the necessary skills, fear of evaluation and the experience of competition. Drawing from these findings, coaches would be wise to employ strategies which enhance young gymnasts' self confidence in regard to skill execution. Particularly while the gymnast is learning a trick or attempting to polish a routine, steps should be taken to reduce unnecessary evaluation of her performance (by coaches, parents, and other gymnasts). To counter the anxiety associated with meets, simulated competitions should be incorporated into training. Further, imagery can be used to help gymnasts become more familiar with the demands of a particular competitive situation.

Athletes also vary in how they manifest stress. To date in this research on members of our TOPs National Team, we have seen that young, elite gymnasts could define and distinguish stress and relaxation and readily provide information concerning what causes the former. Developing effective interventions to counter anxiety entails that we also know how this age group *experiences* stress. An examination of the psychological and physiological manifestations of stress among TOPs National Team Members is the focus of the next article in this series.

References

- Cohn, P.J. (1990). An exploratory study on sources of stress and athlete burnout in youth golf. *Sport Psychologist*, 4, 95-106.
- Gould, D., Jackson, S., and Finch, L. (1993). Sources of stress in national champion figure skaters. *Journal of Sport and Exercise Psychology*, 15, 134-159.
- Gould, D., Petlichkoff, L., and Weinberg, R.S. (1984). Antecedents of, temporal changes in, and relationships between CSAI-2 subcomponents. *Journal of Sport Psychology*, 6, 289-304.
- Jones, G., Swain, A., and Cale, A. (1990). Antecedents of multidimensional competitive state anxiety and self-confidence in elite intercollegiate middle-distance runners. *The Sport Psychologist*, 4, 107-118.

Passer, M. (1983). Fear of failure, fear of evaluation, perceived competence, and self-esteem in competitive trait-anxious children. *Journal of Sport Psychology*, 5, 172-188.

Scanlan, T.K., and Lewthwaite, R. (1984). Social psychological aspects of competition for male youth sport participants: I. Predictors of Competitive Stress. *Journal of Sport Psychology*, 208-226.

Scanlan, T.K., Stein, G.L., and Ravizza, K. (1991). An in-depth study of former elite figure skaters: III. Sources of stress. *Journal of Sport and Exercise Psychology*, 13, 103-120.

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