Coping Strategies Used by U.S. Olympic Wrestlers

Daniel Gould, Robert C. Eklund, and Susan A. Jackson

Extensive in-depth interviews were conducted with all 20 members of the 1988 U.S. Olympic Wrestling Team regarding their efforts to cope with stress experienced during the Seoul Olympics. Qualitative analyses revealed that the wrestlers employed a variety of coping strategies including (a) thought control strategies (blocking distractions, perspective taking, positive thinking, coping thoughts, and prayer), (b) task focus strategies (narrow, more immediate focus, concentrating on goals), (c) behavioral based strategies (changing or controlling the environment, following a set routine), and (d) emotional control strategies (arousal control, visualization). In accordance with the observations of Compas (1987) and Folkman and Lazarus (1985), the coping efforts of the Olympic wrestlers were not limited to particular strategies nor to single approaches to dealing with a particular stressor but, rather, reflected a dynamic complex process involving a number of strategies, often in combination. The results also suggested that the degree to which coping strategies are well learned or automatized is related to their perceived effectiveness.

Key words: psychological factors, elite athletes, stress, stress management, wrestling

This is one in a series of interrelated articles presenting the findings of an in-depth qualitative investigation of psychological factors associated with 1988 U.S. Olympic wrestling excellence. Other articles in the series have focused on mental preparation, precompetitive cognition and affect (Gould, Eklund, & Jackson, 1992a), as well as competitive cognition and affect (Gould, Eklund, & Jackson, 1992b). This article focuses on the coping strategies used by this sample of outstanding athletes to deal with the adversity of the Olympic experience. Comparisons were also made between successful (medal winning) and less successful (non-medal winning) wrestler coping strategies.

Major international sporting events such as the Olympic Games have the potential to be extremely stressful. Sources of the stress include such things as the competition itself (e.g., ego concerns, potential inherent dangers, etc.), media associated pressures, performance expectations, preparatory training, unforeseen events, and travel (see Feigley, 1987; Gould, Eklund, & Jackson, 1990; Murphy, 1986; Orlick & Partington, 1988). Smith (1986) has suggested that failure to constructively cope with the acute stress associated with athletic competition can lead to ineffective cognitive processing, energy reduction, performance decrements, and other debilitating outcomes. Research comparing successful and elite athletes to less successful and nonelite athletes seems to support this notion (e.g., Mahoney, Gabriel, & Perkins, 1987; Orlick & Partington, 1988; Williams, 1986).

For example, in reviewing research comparing successful and unsuccessful athletes, Williams (1986) concluded that successful athletes were better able to maintain a task-oriented focus of concentration and were less likely to become distracted. Similarly, successful athletes were found to be more positively preoccupied with their sport and less likely to dwell on outcome or failure. Similar observations have been made in comparing elite and less elite athletes (Mahoney et al., 1987). Williams (1986) also identified a trend, although not consistent across studies, for successful athletes to exhibit less anxiety immediately before and during competitions than their less successful counterparts. However, Mahoney et al. (1987) have found that elite athletes, rather than experiencing less anxiety than their less elite counterparts, experience fewer problems dealing with that anxiety.

An important addition to this literature was Orlick and Partington’s (1988) in-depth study of Canadian Olympians. In this study both qualitative and quantitative methods were used, and it was found that successful athletes and those performing up to their potential were characterized by comprehensive planning for competition. The extensive use by
these successful athletes of precompetitive, competitive, refocusing, and postcompetitive evaluation plans was identified as critical for maximizing performance, overcoming performance blocks, and managing the competitive environment.

Although these studies of successful versus less successful athlete psychological skills and attributes are relevant to understanding athletes' attempts to cope with the stress of competition, few attempts have been made to examine coping responses in their own right. Hence, there is a need to better understand the coping responses of athletes. In the general psychological literature, coping has been defined as "constantly changing cognitive and behavioral efforts to manage specific external and/or internal demands that are appraised as taxing or exceeding the resources of the person" (Lazarus & Folkman, 1984, p. 141). This definition of coping is premised on a transactional model of stress and emotion that emphasizes that the perception of threat is a result of a dynamic interaction of environment and personal factors. From the perspective of this model, the objective situation is not in itself stress inducing and stable personality factors are not strong predictors of stress. Rather, a particular objective stimulus environment provokes a stress response depending on personal factors such as the individual's cognitive appraisal of the situation and his or her available coping resources.

Consistent with this transactional view of stress, Folkman and Lazarus (1985) have suggested that coping strategies may typically be classified as problem-focused coping (attempts to manage the person/stressor relationship) or emotion-focused coping (attempts to regulate emotional states associated with or resulting from the stressor). However, Compas (1987) has noted that studies with adults indicate that both problem- and emotion-focused coping strategies are used during almost all stressful episodes. Further, coping is not limited to successful efforts but includes all purposeful attempts to manage stress regardless of their effectiveness (Compas, 1987).

The importance sport psychology researchers and practitioners place on coping in the competitive situation is evidenced in their advocacy of self-regulation and arousal control skills to enhance sport performance (Hardy & Nelson, 1988). Indeed, a number of models and programs are explicitly stress management oriented, all owing at least some allegiance to a transactional view of stress. Among the stress management programs that have been applied to and evaluated in the sporting situation are Smith's cognitive-affective Stress Management Training (SMT; Crocker, 1989a, 1989b; Crocker, Alderman, & Smith, 1988; Smith, 1980; Smith & Aschough, 1985), Meichenbaum's Stress Inoculation Training (SIT; Mace & Carroll, 1985; Mace, Carroll, & Eastman, 1986; Meichenbaum, 1977, 1985), and Anshel's (1990) COPE model of stress management. Each of these programs seeks to develop multimodal coping skills to promote what Smith (1980; Smith & Aschough, 1985) refers to as an "integrated coping response." Each program shows some relevance and promise for developing stress management skills and facilitating performance in the sport setting.

Despite the perceived importance of this area for enhancing athletic performance, few studies have examined coping strategies used by athletes in competitive situations. The meager offerings to date in this area (e.g., Madden, Kirkby, & McDonald, 1989; Madden, Summers, & Brown, 1990) have suffered from the lack of knowledge about sport-specific coping strategy and the use of hypothetical coping situations. Hence, if research in the area is to move forward, researchers need to characterize coping efforts used by athletes in ecologically valid sport settings. Qualitative methodologies are particularly useful in garnering rich and detailed data to address such questions (Lincoln & Guba, 1985) and are therefore most appropriate for this investigation.

The purpose of this study, then, was to identify and categorize the coping strategies used by the 20 members of the 1988 U.S. Olympic wrestlers during their Olympic competition. The examination of coping skills used by the wrestlers came about as a consequence of both scientific and practical interests. More specifically, coping emerged as a pivotal point in the investigation of psychological skills and strategies used by 1988 Olympians because USA Wrestling had an interest in learning how to better prepare elite wrestlers to manage competitive stress for future international competitions. Equally, the notable absence in the literature of studies of elite athlete coping strategies piqued the scientific interests of the investigative team. Finally, the extensive history of investigation of psychological factors associated with elite wrestling performance (see Gould et al., 1990) and the stressful nature of the sport provided an excellent backdrop for exploring this area.

We anticipated that coping strategies would emerge that would be amenable to categorization as either problem focused or emotion focused. However, because of the lack of previous research on elite athletes, we thought it was extremely important to first categorize emergent coping strategies inductively instead of forcing a predetermined theoretical structure on them. Further, by contrasting medal winning wrestlers with non-medal winning wrestlers, it was hoped that insights could be gained in identifying coping strategy effectiveness. Based on previous psychological skill and strategy research with elite athletes (Mahoney et al., 1987; Orlick & Partington, 1988; Williams, 1986), medal winning wrestlers were hypothesized to use different coping strategies than non-medal winning wrestlers.
Method

Subjects

All 20 of the 1988 U.S. Olympic wrestlers, 10 Freestyle and 10 Greco Roman, voluntarily served as subjects for this investigation. The subjects ranged in age from 21 to 31 years, with a mean age of 26 (M = 26.6; SD = 2.4). On average these Olympians had 6 years of senior international wrestling experience (M = 5.7; SD = 3.1), although some wrestlers were participating in their first year of senior international wrestling whereas others had as many as 11 years of experience. Finally, 6 of the 20 Olympians (30%) won medals in the 1988 Olympic Games, including two gold, one silver, and three bronze medals.

Instrument

An interview guide was developed for the study to facilitate and standardize the acquisition of the qualitative data. This guide was based on the previous interview research on Olympic athletes of Orlick and Partington (1988) as well as on issues and concerns identified by USA Wrestling in commissioning this investigation. Such a guide helps minimize interviewer effects by asking subjects the same questions in the same words in the same order of presentation (Patton, 1987). The interview guide sections included the following:

1. background and readiness information,
2. Olympic goals and expectations,
3. unforeseen positive and negative events,
4. mental skills used/means of developing mental skills,
5. coping strategies employed,
6. mental preparation strategies,
7. coaching recommendations, and
8. recommendations for improving wrestler preparation.

The focus of this article is on coping strategies employed by these outstanding athletes. In particular, following an extensive discussion of awareness of expectations of others and unforeseen experiences, the wrestlers were asked the question: "How did you try to cope with adversity from the negative effects of expectations and unforeseen experiences? Tell us about the coping strategies." Because of space limitations the complete results of this investigation could not be reported in a single article; this article focuses on the responses to this question and subsequent probes.

Several pilot interviews were conducted prior to the initiation of the investigation with individuals with relevant experience (e.g., collegiate wrestlers and an elite marathon athlete knowledgeable in sport psychology). Feedback obtained from the pilot interviewees as well as critical appraisal by the investigators was used to evaluate and revise the interview guide to ensure clarity and comprehensiveness. As the interview guide was largely based on the extensive work of Orlick and Partington (1988), the revisions were limited to clarifying modifications made in making the guide specific to the sport of wrestling. Further, the evaluative information was used to refine the interviewer’s skills. In particular, to avoid biasing subject responses efforts were made to ensure that the interviewer adopted a neutral, impartial stance in efforts to probe answers (Backstrom & Hursch-Ceasar, 1981).

Procedures

Within 6 months after the 1988 Olympic Games all of the wrestlers were contacted by telephone, explained the nature of the investigation, and asked to participate. It was emphasized that all data would be kept strictly confidential and that only group or subgroup (e.g., medal vs. non-medal winning wrestlers) data would be reported. All 20 of the Olympic wrestlers agreed to participate and were sent a copy of the interview guide containing all of the interview questions. A time for an extensive telephone interview was then scheduled, and all of the interviews were completed within 6 to 12 months after the Olympics (Note 1). All interviews were tape recorded in their entirety and lasted between 90 and 120 min.

Although it would have been most desirable to have the interviews conducted closer to the time of the Olympic Games or during the competition itself, the project was not approved and funded by USA Wrestling until 6 months after the Olympics. Hence, it was not possible to study the wrestlers in a longitudinal fashion (interviewing them over the course of the Olympic Games) or immediately after the Games ended. Because of the salience of the Olympic Games in the lives of these athletes, however, we believed that there was little decay in the athletes’ recollections of the Olympic wrestling tournament and experience. Other qualitative researchers investigating the experiences of Olympians have conveyed similar beliefs regarding the recall of this extremely important life event (Orlick & Partington, 1988) and have noted that simple recall of this salient event stimulated physical responses such as sweating, muscular tension, increased heart rate, etc. among study participants. Whereas trivial information in laboratory investigations has been found to be retained only for a short period of time, autobiographical memory, particularly of memorable events, has been found to be much more resilient (Ashcraft, 1989). For example, Wagenaar’s (1986) controlled investigation of personal memory over a 6-year time span revealed that the salience of an event and the degree of emotional involvement were much more powerful predictors of retention than time lag. Notwithstanding the investigators’ confidence in the
athletes' recall of this memorable experience, they acknowledge that the results must be interpreted within the context of the temporal delay. Similarly, conducting multiple interviews after each match during the Olympics would have been highly desirable from a design perspective but was not feasible. Hence, the design is limited in this way as well.

All of the interviews were conducted by the second author, thus providing a constant across the interviews. The interviewer was a former international wrestler and hence familiar with sport terminology and circumstances. This researcher was trained in and had previous experience in qualitative research methodology.

Data Analysis

An eight-step procedure was used to prepare and analyze the qualitative data generated in this investigation. Each of these steps is outlined and described below.

1. All 20 tape-recorded interviews were transcribed verbatim, resulting in 750 single-spaced pages of interview data.

2. Two investigators (the first and third authors) read and reread all 20 transcripts until they became completely familiar with them. Both investigators had a background in qualitative research methodology and had previously conducted qualitative research.

3. Independently, the first and third authors identified raw data themes (quotes or paraphrased quotes that captured major ideas conveyed) characterizing each wrestler's responses within the coping subsection of the interview and developed idiographic profiles or summary abstracts of each wrestler. Subsequently, through extensive discussion, consensus was obtained on a joint profile for each wrestler as well as on a list of subsection raw data themes characterizing each subject.

4. The interviewer and the two other investigators extensively discussed the idiographic profiles of each wrestler and all raw data themes until consensus was reached. Hence, agreement among all three investigators or triangular consensus (Lincoln & Guba, 1985) had to be reached on all 20 idiographic profiles and all raw data themes. When disagreements between investigators emerged, the investigators would reexamine the transcripts and rediscuss points of contention. The viewpoint of the interviewer was considered especially salient in settling interpretative disputes because he conducted the interviews and had the advantage of talking directly to the study participants.

5. Sectional raw data themes characterizing each wrestler in Step 4 were compiled across wrestlers. This resulted in a listing of raw data themes within each subsection encompassing the sum total of responses by all 20 wrestlers.

6. Following the general procedures outlined by Scanlan, Ravizza, and Stein (1989), an inductive analysis was conducted to identify common themes of greater generality from the lists of subsection raw data themes generated in Step 5. Second-level themes were labeled "Higher Order Themes," while the highest level themes (those of greatest abstraction) were labeled "General Dimensions." Triangular consensus was reached at each level of analysis.

7. As an additional verification of the inductive analysis, the raw data themes, higher order themes, and general dimensions were tested by conducting a deductive analysis whereby the investigators went back to the original transcripts and verified that all themes and dimensions were represented. This process also allowed the investigators to record the number of wrestlers who cited each theme, higher order theme, and/or general dimension and to record the total number of citations.

8. Extensive scrutiny of interview transcripts was conducted to compare subgroup coping efforts. In particular, medal versus non-medal winning and Greco Roman and Freestyle wrestlers were compared (Note 2).

Results

Inductive Analysis of Coping Strategies

Figure 1 shows the 39 raw data themes extracted from the transcripts regarding coping strategies. Subsequently these raw data themes were organized into 11 higher order themes. Finally, these 11 higher order themes were further abstracted into four general dimensions, which were considered an accurate synopsis of coping strategies used by the USA wrestlers in Seoul. The four dimensions arrived at were (a) Thought Control Strategies, (b) Task Focus Strategies, (c) Emotional Control Strategies, and (d) Behavioral Based Strategies. These dimensions are not considered mutually exclusive. Rather they were distinct, albeit intertwined, threads of the larger fabric of coping with the circumstances associated with the Olympic Games.

Table 1 reports the percentage of individuals who identified each of the dimensions and higher order themes. Although some higher order themes are representative of the comments of a relatively small percentage of the total group, it was considered important to characterize all of the responses to the coping queries. Additionally, wrestlers usually identified more than one coping strategy, and as a consequence the total of numbers appearing for higher order themes within a dimension can exceed the number of wrestlers who represented that dimension. For example, in the dimension of emotional control strategies the number of wrestlers mentioning the two higher order themes (9) exceeds the number representing the overall dimension (8). The observation that wrestlers identify more than one coping strategy is
consistent with the notion that coping is a dynamic, complex process.

**Thought Control Strategies.** Thought control strategies were found to be the most often reported coping strategies used. Nineteen raw data themes cited by 16 (80%) wrestlers were organized into five higher order themes, which were subsequently conceptualized into the dimension of Thought Control Strategies through an inductive process. The dimension of thought control was considered to collectively reflect efforts by the athletes to impose order or constraint on their thought content in some general sense. Coping strategies conceptualized under this dimension were reflected in 80% of the interview transcripts. The higher order themes from

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**Figure 1. Hierarchical development of coping strategy dimensions.**

<table>
<thead>
<tr>
<th>Raw Data Themes</th>
<th>Higher Order Themes</th>
<th>Dimension</th>
</tr>
</thead>
<tbody>
<tr>
<td>Block things out—let nothing interfere</td>
<td>Blocking Distractions</td>
<td>Thought Control Strategies</td>
</tr>
<tr>
<td>Put previous match out of mind</td>
<td></td>
<td></td>
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<tr>
<td>Focus out that have to wrestle Korean</td>
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<td></td>
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<tr>
<td>Focus out referee</td>
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<td></td>
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<tr>
<td>Not focusing on opponent</td>
<td></td>
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<tr>
<td>Thought stopping</td>
<td></td>
<td></td>
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<tr>
<td>Put mistakes out of mind</td>
<td></td>
<td></td>
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<tr>
<td>Not let injuries bother me</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rational self-talk</td>
<td>Perspective Taking</td>
<td></td>
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<tr>
<td>Focus on what you can control</td>
<td></td>
<td></td>
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<tr>
<td>Not get caught up in Olympics; treat as any other tournament</td>
<td></td>
<td></td>
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<tr>
<td>Put things in perspective</td>
<td></td>
<td></td>
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<tr>
<td>Try not to put too much pressure on self</td>
<td></td>
<td></td>
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<tr>
<td>Positive thinking</td>
<td>Positive Thinking</td>
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<tr>
<td>Write positive affirmations</td>
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<td></td>
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<tr>
<td>Remember previous victories</td>
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<td></td>
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<tr>
<td>Focus on strengths</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Learn to cope through experience</td>
<td>Coping Thoughts</td>
<td></td>
</tr>
<tr>
<td>Use adversity as a stimulus</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Prayer</td>
<td>Prayer</td>
<td></td>
</tr>
<tr>
<td>Tunnel vision</td>
<td>Narrow, More Immediate Focus</td>
<td>Task Focus Strategies</td>
</tr>
<tr>
<td>Take it one match at a time</td>
<td></td>
<td></td>
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<tr>
<td>Focus on match at hand</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Analyze mistakes then focus on next match</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Task focused self-talk</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Focus on what you want to do</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Just keep fighting</td>
<td></td>
<td></td>
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<tr>
<td>Concentrate on goals</td>
<td>Concentrate on Goals</td>
<td></td>
</tr>
<tr>
<td>Stay relaxed and control breathing</td>
<td>Arousal Control</td>
<td>Emotional Control Strategies</td>
</tr>
<tr>
<td>Try to get to the same emotional/mental state before each match</td>
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<td></td>
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<tr>
<td>Walkman with music or relaxation tape</td>
<td>Visualization</td>
<td></td>
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<tr>
<td>Concentrate on goals</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Surround self with &quot;at ease&quot; people</td>
<td>Change/Control the Environment</td>
<td>Behavioral Strategies</td>
</tr>
<tr>
<td>Separate self from others</td>
<td></td>
<td></td>
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<tr>
<td>Make alternate plans, plan ahead, budget time</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rest</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Distract self with other activities</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Follow same routine</td>
<td>Follow Set Routine</td>
<td></td>
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<tr>
<td>No emotional reaction—don't look upset</td>
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which the coping dimension of Thought Control Strategies was abstracted were labeled "blocking distractions," "perspective taking," "positive thinking," "coping thoughts," and "prayer."

The most frequently referred to higher order theme within the dimension of Thought Control Strategies was "blocking distractions" and simply referred to efforts by the wrestlers to deny access to their consciousness of distracting, irrelevant, or irritating thoughts. This was abstracted from comments such as the following:

I focus on having tunnel vision....I eliminate anything that's going to interfere with me. I don't have any side doors, I guess, for anyone to come into. I make sure that nothing interferes with me.

Similarly, this higher order theme can be evidenced in the following quotation regarding coping with injury:

It seems that you just put it behind you. It's just like this is a three-day tournament, if you can't suck it up for three days, you shouldn't be in the sport. It's an injury sport....You really just don't let it bother you. You just don't let it distract you.

The second most frequently referred to higher order theme within the dimension of Thought Control Strategies was "perspective taking." Thirty-five percent of the wrestlers made comments abstracted into this higher order theme. Perspective taking involved attempts at rational thinking to place the event within a subjectively reasonable mental framework in which the wrestler felt comfortable or in control. This higher order theme can be evidenced in the following wrestler quotation:

A lot of times I just think about what other people have to deal with. You know, handicapped men or starving men or something like that and just kind of put it into the total perspective. Knowing that, hey, I am doing pretty good over here.

The third most frequently referred to higher order theme within the dimension of Thought Control Strategies, mentioned by 25% of the wrestlers, was "positive thinking." Positive thinking involved the mental activity of actively attempting to view unforeseen events, distracting or negative circumstances in a positive light, or, alternatively, replacing negative thoughts with corresponding positive images. This higher order theme was reflected in comments such as the following:

I just tried to look at most everything that happens in a positive manner. Try not to doubt yourself. Once you start doubting yourself like maybe I should have run that extra mile, or maybe I should have done this, they can take over pretty easy in a tense situation. You have to try to stay positive....I would say you can't overdo it positively, but you have got to stay on a pretty even keel;

and

If you get knocked down to one knee or something, there are two ways you can interpret it. You can say "he's destroying me, making me look bad" or you can say "well he only knocked me down on my knee, he didn't score, I feel good, I feel strong, he's getting tired." I think it's always been important to really respect my opponent and be positive in my own response to myself because if you are negative, you will just talk yourself down into being nothing.

The higher order theme of "coping thoughts" within the dimension of Thought Control Strategies was mentioned by 10% of the athletes and involved efforts to use adversity as a stimulus or placing the situation in the context of past experiences. The final higher order theme of "prayer" in this dimension was also mentioned by 10% of the wrestlers and involved the diversion of
thoughts to an appeal for divine intervention, inspiration, or support.

Task Focus Strategies. Task Focus Strategies for coping as a dimension was interpreted from a total of eight raw data themes present in 40% of the interview transcripts. These eight raw data themes were then organized into two higher order themes. The higher order themes from which the coping dimension of Task Focus Strategies was abstracted were "narrow, more immediate focus" and "concentrating on goals."

The dimension of Task Focus Strategies was considered to reflect efforts to control thought content by the wrestlers on a very specific, limited spectrum. The most frequently referred to higher order theme (by 85% of the wrestlers) within this dimension was that of a "narrow, more immediate focus." This characterization refers to efforts to concentrate on the match at hand and very immediate process demands while ignoring the implications of past and present performance outcomes. Descriptions of coping strategies through task focus can be found in the following quotations:

I just stayed positive and focused on putting it behind me and not thinking about it anymore...and then just started thinking about the next match;

and

I just tried to focus on my individual, I do best when I prepare myself and know what I need to do individually....You just try to focus on your matches.

The other related higher order coping theme identified by a single wrestler related to attempts to concentrate on goals and objectives the wrestler had set for himself for the tournament and is consistent with conceptualization of this dimension with the exception that the time frame is less immediate.

Emotional Control Strategies. The dimension of Emotional Control Strategies was considered to reflect wrestlers’ efforts to control their feeling state or activation level. This dimension was interpreted from themes present in 40% of the interviews represented in four raw data themes. These four raw data themes were then organized into two higher order themes. The higher order themes from which the coping dimension of Emotional Control Strategies was abstracted were "arousal control" and "visualization."

The most frequently referred to higher order theme within this dimension was that of "arousal control" through the use of relaxation, breathing control, music or relaxation tapes, and other attempts to arrive at a more optimal emotional–mental state. Thirty-five percent of the wrestlers made comments conceptualized within this higher order theme. Breathing control was the most often reported single technique used within this dimension of coping strategies (20% of the wrestlers). Visualization was also used by 10% of the wrestlers in this regard.

Behavioral Based Strategies. The dimension of Behavioral Based Strategies was considered to reflect coping efforts characterized by the enactment of overt behavioral responses. The dimension of Behavioral Based Strategies for coping was interpreted from seven raw data themes present in 40% of the interview transcripts. These seven raw data themes were then organized into two higher order themes. The higher order themes from which the coping dimension of Behavioral Based Strategies was abstracted were "changing or controlling the environment" and "following a set routine."

The most frequently referred to higher order theme within this dimension (cited by 50% of the wrestlers) was that of "changing or controlling the environment." Behavioral strategies that the wrestlers used to change or control their environment included such strategies as surrounding self with "at ease people," separating self from others, making alternate plans to avoid dealing with irritants, and distracting self with other activities. For example, one wrestler demonstrated the use of this general strategy in the following quotation:

A lot of times I would walk away from it. Say it was lunch time, 11:45, and I didn’t feel like dealing with the crowd. I would have just gone downstairs and got a couple of cookies and a soda and then ate lunch later on when the crowd wasn’t there instead of going over there. Kind of an avoidance. And then there was like just going and grabbing a buddy. "Hey [buddy], what are you doing, you know, let’s listen to music, let’s play cards, let’s play checkers"—you know, take an outlet with something familiar to me.

Similarly, the strategy of adhering to a predetermined, familiar, ingrained behavioral routine to minimize uncertainty and focus attention was identified as useful in this regard. This coping strategy was evidenced in the specific warm-up routines that wrestlers used to prepare for matches and also in preplanned behaviors for dealing with adverse incidences such as bad calls by the referee. One wrestler described his routine for dealing with bad calls in the following way:

I tried not to get very emotional. I didn’t say anything to the referee....I didn’t look at the coaches, I didn’t make any body gestures or anything. The things I did was to breathe as deep as I could, took like
three deep breaths and just looked at my opponent and just walked back to the middle. Didn't even listen to the refs. Just tried to focus them out and keep concentrating on the match.

In addition to the evidence of a particular behavioral routine, this quotation also contains elements relevant to "emotional control" and "task focus" themes. Hence, this quotation also illustrates that the coping efforts of the Olympic wrestlers were not limited to particular strategies or single approaches to dealing with a particular stressor. Rather, it can be seen that coping is a dynamic, complex process involving any number of strategies in combination.

Coping Subgroup Comparisons

In examining interview transcripts for differences between medalists and nonmedalists, it was found that the salient differences in ability to cope with adversity appeared to lay in the extent to which the individual's strategies were well practiced and internalized. The medalists seemed to have their strategies internalized to such an extent that these strategies acted as automatized buffers to adversity, that is, the medalist strategies appeared to be so well learned that the wrestler did not have to consciously engage them when faced with a potentially threatening circumstance. Rather, like a well-learned athletic skill, the coping strategy was quickly initiated without a great deal of thought. This type of automatized coping strategy also had the advantage of buffering or minimizing the effect of aversive events because either the stress caused by the aversive event or the aversive event itself was dealt with immediately, before its negative ramifications could gain momentum. As one wrestler described this:

Something I've always practiced is to never let anything interfere with what I'm trying to accomplish at a particular tournament. So what I try to do is if something is trying to bother me, it's an automatic effect for me to completely empty my mind and concentrate on the event coming up....My coping strategy is just to completely eliminate it from my mind, and I guess I'm blessed to be able to do that.

Because of the automatized buffering nature of the coping strategies of the medalists, these wrestlers seemed to perceive adversity as less threatening or even in a positive light. This was inferred not only through descriptions of coping efforts (as above) and the less frequent reference to adverse conditions but also through the lesser intensity of the references to adversity.

In contrast, the nonmedalists did not seem to have their coping strategies as well developed, practiced, or internalized and hence tended to have to consciously engaged coping strategies in response to perceptions of stress or adversity. Whereas the medalists seemed to be able to maintain a relatively stable and positive emotional level because of their automatized coping strategies, nonmedalists experienced more of an emotional roller-coaster effect as a consequence of cycles of experiencing perceptions of threat followed by implementation of coping strategies. The following quotation of a nonmedalist regarding the stress of his Olympic experience illustrates this roller-coaster effect:

I had a tape, a relaxation tape, that I would listen to, and it seemed to give me moments of relief I guess because I was able to listen to the tape....I got to the point where what you would try to do was not think about wrestling and get your mind on other things. But inevitably...you would bind up and get tight, pulse would pick-up and your palms and legs and hands or feet are sweating and you go through that thing trying to relax or trying to sleep and I would resort to my relaxation tape. I don't think I coped very well with it really.

Problem-focused Versus Emotion-focused Coping

Because of the lack of previous research on sport coping strategy, it was deemed most appropriate to use qualitative methodology and inductive data analysis in this investigation. As an additional tool of analysis the investigative team attempted to deductively categorize the 39 coping strategy raw data themes contained in Figure 1 into Folkman and Lazarus's (1985) problem-or emotion-focused coping categories to investigate the hypothesis that coping strategies could be characterized as such. It was found that the qualitative data were not amenable to simple interpretation within this framework. Coping is a dynamic, complex process in which the athlete can simultaneously be striving to both manage the person/stressor environment and regulate distressing emotions. The same strategy may also be used in one instance to regulate emotions and in another to manage the environment. Hence, it is perhaps not surprising that this analysis was unsuccessful. The unsuccessful attempt to use Folkman and Lazarus's (1985) coping strategy dichotomy to interpret these data reinforces the complex nature of coping efforts. Further, it might be more useful in the future not to classify coping strategies as problem-versus emotion-focused but to classify how they are used by the athlete—to achieve problem- or emotion-focused control (L. Hardy, personal communication, September 19, 1991)—and to collect data relative to this end.
Discussion

The wrestlers reported that they faced a great deal of adversity throughout the Olympic Games and employed a variety of coping strategies to deal with this adversity. These included the use of (a) thought control strategies (blocking distractions, perspective taking, positive thinking, coping thoughts, and prayer), (b) task focus strategies (narrow, more immediate focus, concentrating on goals), (c) behavioral based strategies (changing or controlling the environment, following a set routine), and (d) emotional control strategies (arousal control, visualization).

Of the coping strategies used, thought control strategies were employed by the highest percentage of wrestlers (80%), whereas task focus, emotional control, and behavioral strategies were reflected in a much smaller number of transcripts (40%). Unfortunately, reasons for this discrepancy are not readily apparent; however, it is possible that the majority of wrestlers more often experienced cognitive (as opposed to somatic) stress and more often employed cognitively based coping strategies. This would be consistent with Burton’s (1990) “match hypothesis” that coping strategies are most effective if linked to the domain in which stress is being experienced. The wrestlers may have also found cognitive strategies more effective and for that reason more wrestlers may employ them. It would be fruitful to examine these issues in future investigations.

In accordance with the observations of Compas (1987) and Folkman and Lazarus (1985), it was apparent that the coping efforts of the Olympic wrestlers were not limited to particular strategies nor single approaches to dealing with a particular stressor. Rather, the process of coping is a dynamic complex process involving any number of strategies, often in combination. These observations are also consistent with the conceptual underpinning of multimodal approaches to stress management such as the SMT (Smith, 1980; Smith & Aspough, 1985), SIT (Meichenbaum, 1977, 1985), and COPE (Anshel, 1990. Hence these stress management programs should be further examined and refined within the sporting context. For example, studies need to be conducted to determine which aspects of these multidimensional programs (e.g., physical relaxation, imagery, cognitive restructuring) are related to coping effectiveness and how these specific strategies interact with one another. Moreover, it would be useful to determine when specific components of these stress management programs are used and for what purposes.

In comparing the medalists and nonmedalists, the most important finding derived from the wrestlers’ comments was in the degree of automaticity in coping strategies found in medal winning wrestlers. Non-medal winning wrestlers did not have their coping strategies as well learned or internalized and had to consciously engage them when faced with adversity. Lazarus and Folkman’s (1984) contentions regarding stress as a transactional process between the person factors and objective environment are salient. This finding reflects the need to automatize coping strategies through long-term development and implementation, thus influencing the relationship between person factors and stress stimuli.

However, Lazarus and Folkman (1984) have argued that it is important to limit the conceptualization of coping behaviors to effortful or purposeful reactions to stress while excluding reflexive, instinctive, or automatic reactions to the environment. In the absence of such delimitation virtually all responses to the environment could qualify as coping behaviors. Compas (1987), while acknowledging that a broader conceptualization is problematic, points out that purposeful responses may become automatic with sufficient repetition. Such automatized mastery responses, while not requiring conscious control, in some degree still represent planned adaptive or coping behavior. Such well-learned, purposefully acquired skills seem relevant, even necessary, in the context of intensely competitive events such as the Olympic Games.

Although our in-depth examination of the interview transcripts suggested that coping strategy automaticity was strongly related to coping effectiveness and superior performance, other factors could account for this relationship. For example, nonmedalists might have made external attributions regarding coping whereas medalists may have retrospectively minimized adversity or difficulty in coping. Hence, although the investigative team did not believe that this was the case, the possibility of such an attributional bias cannot be ruled out. Some caution must therefore be used in interpreting the automaticity findings.

Based on the findings of this investigation, several lines of future investigation seem warranted. First, it would be useful to link the types of coping strategies employed by the athletes to the specific type of multidimensional state anxiety experienced. Are thought control category strategies, for instance, more often linked to cognitive state anxiety while emotional control strategies are more often used to cope with somatic state anxiety?

A second important area of future research would involve the examination of specific coping strategies. Additional investigations asking elite athletes to specifically identify what are effective and ineffective coping strategies for them would be very helpful. Such an approach might also shed light on the findings of automatizing coping strategies to ensure that they are effective. The qualitative analysis of our data, for example, suggests that the particular coping strategy used may not be as important as the elite athlete’s ability to initiate and use that strategy in an automatized fashion.
A third direction for future research involves the need to design coping strategy intervention investigations. Although recognized as a legitimate method for obtaining knowledge (Lincoln & Guba, 1985), the retrospective design used in this investigation prohibits the establishment of causal relationships when comparisons of successful and less successful competitors are made. One means of rectifying this limitation would involve teaching wrestlers those coping strategies found to be associated with wrestling success (and especially having subjects learn these strategies to such an extent that they become automatized). Comparisons of intervention and control subjects would allow investigators to better establish causal links between coping strategy use and performance.

Because Lazarus and Folkman (1984) indicate that coping is a long-term process, it is recommended that future investigators conduct longitudinal studies of elite athletes where multiple interviews take place over seasons or multiple seasons and varying performance contexts (e.g., easy matches, difficult matches, injury situations). In that way the links between coping strategy use, stress reduction, and performance could be further clarified. Conducting these types of longitudinal qualitative interviews would also help investigators overcome the limitations of one-time retrospective interviews (e.g., were the findings accurately recalled, or does event outcome determine one's recollection of effectiveness feelings related to strategies employed?).

Finally, research examining whether similar coping strategy results would be evident in other populations is needed. For example, would these findings apply to less elite wrestlers or other athletes of lesser ability? In addition, because the athletes studied in this investigation were all males, would female athletes exhibit similar findings?

References


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**Notes**

1. Because these wrestlers lived throughout the United States, it was not economically feasible to travel to each of their homes to conduct face-to-face interviews. Hence, telephone interviews were tape recorded. Unfortunately, no research was available to identify strengths and limitations of face-to-face versus phone interviews, although it could be argued that the interviewer is at a disadvantage in phone interviews because he or she cannot react to nonverbal behaviors of the subject. However, this is offset by the fact that the subject cannot react to nonverbal behaviors of the interviewer. Lastly, it was the interviewer’s experience in this investigation that the anonymity of the phone may have the advantage of allowing the subjects to freely disclose their feelings.

2. Although subgroup comparisons between wrestling styles were conducted in the data analysis and some minor differences were noted, these observed differences were primarily of interest to USA wrestling for program purposes. The observed differences were not interesting scientifically and hence are not reported.

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