Marathon Motivation in Honolulu

In an attempt to fill a void in the field of sport psychology outlined by Duda and Allison (1990), which highlights a dearth of cross cultural research, Hayashi and Weiss measured the characteristics of achievement motivation reported by American and Japanese marathon runners. Three hundred fifty-eight marathon runners were administered a questionnaire that measured achievement goals (TEOSQ), sport orientation (SOQ), and a need for uniqueness (NUS) prior to the Honolulu marathon. Both Japanese and English versions of the questionnaire were constructed. Multivariate analysis of covariance (using age and experience in marathon running as covariates) results indicated that the Japanese and American samples differed on dimensions of the Sport Orientation Questionnaire. Specifically, it was found that Japanese runners were more win oriented and that the American runners were more competitive.


Slumping Sophomores

Noting that considerable media attention has been given to the phenomenon of the sophomore slump, Taylor and Cuave examined whether this was a real issue or simply a performance regression toward the mean. The authors describe the phenomenon as a drop in baseball performance in the second year of employment, after recording outstanding performance statistics in the first year. Archival data were obtained on baseball players who had played in the major leagues between 1945 and 1983. One hundred four athletes met the criteria for inclusion in the sample of slumping athletes. Results indicated that there was evidence of a sophomore slump for home run performance, as athletes’ average performances in years 3 through 5 returned to the form shown in the rookie season. Alternatively, when batting average was considered, there was evidence of a regression toward the mean, as the average performance between Years 3 to 5 resembled that of the sophomore year. Thus, the results appear inconclusive.


Does Goal Setting Work in Real Life?

Although goal setting has been shown to positively affect performance in laboratory settings, few studies have used athletes in real-life competitive situations. To deal with this issue, the authors of this study used four male university varsity basketball players and a single-subject design to investigate the effect of goal
setting on specific components of basketball performance across several games of a season. Statistics were kept for each athlete during the first eight games of the season. Athletes then selected one component of their game that was important to them and that had seemed to plateau. They then set goals for themselves over the next eight games concerning that component. Results showed that 3 of the 4 athletes improved that component. The fourth athlete improved only slightly. However, all four reported a mobilization of effort and attention being directed to the targeted performance. More importantly, other areas of their games showed no decrease in performance, even though athletes were focusing on only the one aspect they had selected. The authors also point out that using single-subject designs in goal-setting research may be more appropriate because group data may mask individual improvement.


**Big Is Better**

Students enrolled in medium-sized (18–26) or large (70–90) aerobics classes were assessed as to their perceptions of environmental factors, their instructor, attractiveness of their classmates, and their satisfaction with space, music, instructor, and exercise. In addition, they completed a modified version of the Group Environment Questionnaire that measured cohesion. Adherence was measured by the number of classes attended (frequency) and by the percentage of time the participants perceived themselves to be working at 80–85% of their maximum capacity (intensity). Results showed that class size was related to adherence: participants in large classes had fewer absences and more often worked at the prescribed intensity level than did those in medium-sized classes. Instructor leadership did not moderate either attendance or perceived exertion. Class size was also related to perceptions of the environment, instructor and classmates, class satisfaction, and class cohesion, with members of large classes indicating more favorable ratings. The authors point out that because perceptions of the environment, satisfaction, and cohesion were not related to attendance but were related to perceived exertion, these variables may be mediating only the class size–exertion relationship.


**Kill the Bums: Umps and Stress**

Baseball and softball umpires (N = 782) completed The Ontario Soccer Officials Survey (adapted for baseball/softball) that measured sources of stress. Factor analysis revealed four factors that contributed to stress: Fear of Failure (worries about the adequacy of performance), Fear of Physical Harm, Time Pressure (conflict caused by time demands of officiating), and Interpersonal Conflict (interpersonal conflicts with players, coaches, and fans). Interestingly, although umpires implicated these factors as sources of stress, they reported that they contributed only "mildly." The author suggests that interventions related to stress among umpires should be
specifically geared toward the cause of the stress. For example, stress from Fear of Failure may be alleviated by thought stopping, whereas stress from Interpersonal Conflict might be resolved by relaxation training.


**They’re Old: Deal With It!**

This article suggests some new approaches and perspectives to researching and working with the ever-growing geriatric population. The author begins with a brief overview of the aging of the populace and the reason for the occurrence. With this as a foundation, the author suggests a need for a strong research base to provide frameworks for sport psychologists and exercise professionals to work with the geriatric population. An emphasis is placed not on longevity of life, but on the quality of life. With this in mind, the author outlines six areas of utmost importance: self-esteem, self-confidence, motivation, social support and social comparisons, psychological skills, and psychological stress. Self-esteem is defined and broken into four subdomains: appearance, sport competence, functional capacity, and health/disease state. Self-confidence has historically differed relative to gender. The author calls for a reexamination of this perspective to study any changes due to altered societal roles. Motivation must be assessed relative to age to determine similarities and differences over time. Social support and social comparison appear to differ between young and old, with the young relying more on social comparison and the elderly relying more on “temporal comparisons” (comparing past performance to present). Psychological skills of the elderly have been ignored in research and merits study. Finally, psychological stress appears to be a factor in the frequency and level of exercise and activity. With the overwhelming evidence of the forthcoming burgeoning geriatric population, we need to begin now to assess these factors related to the quality of life.


**I Went to a Fight and . . .**

It is well known that fights are associated with the game of hockey and that fans sometimes encourage the fisticuffs. But what about fan violence at hockey games? The present article attempts to provide some insight into the personality characteristics associated with this category of violence. Four studies were conducted to determine factors related to reasons for attending and the propensity of fans to be involved in crowd disturbances. Usually, attribution for fan violence is made to visiting fans, known troublemakers, and disaffected youth. This study attempted to expand the understanding of such incidence through the assessment of individual differences. All components of the study were conducted at Western Hockey League Games. A synthesis of the findings indicated that young single males were most likely to attend hockey games to watch the fights. They also represented the group most likely to join in a fight.

Ironpeople and Anxiety

This study examined three questions related to anxiety and performance in endurance athletes. First, does state anxiety have a significant negative effect on endurance performance? Second, does age or sport type influence this relationship? Third, does cognitive state anxiety have a stronger effect on endurance performance than somatic state anxiety? Data from almost 300 triathletes, runners, and cyclists indicated that precompetitive state anxiety did not impair performance. However, triathletes were significantly more anxious (both cognitively and somatically) than either runners or cyclists, and younger athletes experienced more cognitive anxiety than older athletes. Cognitive anxiety appeared to correlate more strongly with performance than somatic anxiety, but none of these correlations were statistically significant.


Stress Response and Body Fat

There is evidence that heightened body fat is characterized by a “hypostress” response to physical stress. High percentage of body fat has been associated with a lower epinephrine response to acute exercise, but the association between adiposity and nonexercise stress has not been explored. The purpose of this study was to examine the relationship between body fat and psychophysiological responses to an active coping, cognitive/psychomotor stressor. Twelve low fat (12 ± 4%) and 9 high fat (27 ± 2%) adult males were matched on age, lean weight, VO₂peak (ml · kg LBW⁻¹ · min⁻¹), and trait anxiety (STAI-T). A modified Stroop double conflict task was administered for 12 minutes. State anxiety was measured before and after the task. Changes in heart rate, venous plasma norepinephrine and epinephrine were measured during the task, and responses were compared as a function of group. Physiological and psychological responses did not differ based on body fatness. The “hypostress” syndrome associated with high body fat did not generalize to the relatively low metabolic challenge of the cognitive/psychomotor task. Concerns about body fat confounding changes in stress reactivity to nonexercise stress as a function of exercise training may be unfounded.


Mindful Exercise Versus Traditional Exercise

Exercise training is not as effective in improving psychological well-being in the general population as it is in individuals with anxiety, depression, or mood disturbances. The purpose of this research was to compare the psychological effects of exercise training plus cognitive strategies to those of standard exercise programs of low and moderate intensity. It was hypothesized that adding cognitive strategies could augment the psychological benefits of exercise. One hundred
thirty-five healthy, sedentary, older men and women were randomly assigned to a control group or one of four exercise groups. Mood, self-esteem, personality, and life-satisfaction were measured before and after the 16-week program. Women in the moderate intensity (65–75% heart rate reserve [HRR]) walking group improved their body image, and men increased positive affect. There were no posttest changes in psychological measures in the low intensity (45–55% HRR) walking group, or in the low intensity group plus relaxation strategies. Women in the mindful exercise (t’ai chi) group decreased tension, depression, anger, confusion, and total mood disturbance. Both women and men in the moderate walking group increased aerobic capacity. Fitness also improved for women in the low intensity group and men in the low intensity plus relaxation groups. More research is needed on the psychophysiological adaptations to exercise plus cognitive strategies in a variety of populations.


**Cardiovascular Strain in Cardiac Patients**

Although exercise can aid in the secondary and tertiary prevention of coronary heart disease (CHD) negative effects such as increased risk of morbidity and mortality have occurred due to repeated overexertion. It is assumed that the perception of cardiovascular strain influences physical exertion, but angina pectoris is unreliable as a sign of overexertion in cardiac patients. The author suggests that CHD patients may lack cardiovascular interoception and, like their healthy counterparts, may be more likely to underestimate than overestimate physical strain. However, for CHD patients, underestimation of cardiovascular strain can have serious health risks. In this study, 693 male and female CHD patients estimated their heart rate during exercise using a modification of the Borg scale. Repeated measures were taken over a range of exercise intensities and activities and compared to actual heart rate. Patients were split into three groups of overestimators, underestimators, and correct estimators. Nearly 40% of the patients underestimated heart rate consistently. They were able to detect different levels of strain, but underestimated strain at each level. Patients with low fitness underestimated more than others, putting these subjects at even greater risk. The hypothesis that CHD patients lacked interoception more than healthy subjects was not supported.


**Elusive Antecedents of Flow**

Stein, Kimiecik, Daniels, and Jackson set out to investigate the motivational antecedents of flow in recreational athletes. Three studies were conducted to determine whether achievement goals, perceived competence, and self-confidence would predict flow experiences. The first study, conducted in the context of competitive tennis, examined differences between players who were classified as in flow and those who were not. The results indicated that players in flow
were more satisfied with their performance than were those not experiencing flow. However, no differences were found on any of the motivational variables.

Study 2 used a modified version of the Experience Sampling Method described by Larson and Csikszentmihalyi (1983) to measure flow in recreational basketball classes. After the data had been transformed to create four experience contexts (flow, boredom, apathy, and anxiety), the authors examined whether there were differences between the four contexts on the variables of enjoyment, satisfaction, concentration, control, and success. Differences in the quality of experience were found, with the flow context being the most enjoyable, and the apathy and boredom contexts the least enjoyable. Further differences on the cognitive and affective measures of interest suggested that the flow context allowed athletes to engage in a more positive sport experience than any of the other contexts.

Study 3 attempted to measure antecedents of flow in a group of senior golfers. Two data-collection points were selected on each golfer’s round: one on the front nine holes and one on the back nine. The antecedent variables were measured while standing on the tee, and flow was measured retrospectively once the hole had been completed. Results indicated that golfers in the flow and boredom contexts had more positive cognitions and affective responses, and played better golf than those in the anxiety and apathy contexts. Despite finding that optimal experiences are possible in three different contexts, the authors suggested that a greater understanding of the antecedents of flow remained elusive.


Purposeful PE?

Because little attention has been given to examining achievement motivation in the context of physical education (PE), Walling and Duda set out to determine whether motivational goals underpin high school students perceptions regarding the purposes of PE and their beliefs about success in this activity. Seventy-eight female and 66 male high school students completed a questionnaire that measured the variables of importance. A modified version of the Task and Ego Orientation in Sport Questionnaire (TEOSQ) was used to assess when children felt most successful in PE classes. Beliefs about the cause of success were measured using items developed from instruments assessing the same construct in sport and from a review of the extant physical education literature. Additionally, a 60-item scale measuring the perceived purposes of physical education was constructed by adapting an instrument developed by Duda (1989). The results indicated that in general, students were higher in task orientation than ego orientation. Additionally, students believed that success in PE occurs when participants have an intrinsic interest in the class, put forth effort, enjoy participation, and cooperate with their fellow students. In a further analysis, it was found that high ego students were more likely than low ego students to believe that ability was a cause of success. Alternatively, those high in task orientation were more likely to consider that intrinsic interest and effort would lead to success. Goal orientations were also found to be related to the purposes of sport. The high task students thought that PE enabled students to learn the value of mastering skills and
cooperating with peers. Additionally, those classified as low task/low ego were significantly different from all other goal groups on eight of the nine purposes of PE scales, suggesting they were alienated and apathetic toward the activity. The results are consistent with those found in sport contexts, and they confirm that a high task focus is clearly a more adaptive motivational strategy to adopt in learning environments than an ego orientation.


**Stress: Good, Bad, and the Definition**

In this article, Don Franks lays the cornerstone for a special issue of *Quest* based on a meeting of the American Academy of Kinesiology and Physical Education in Washington, DC, March 1993. He briefly examines both sides of stress—positive attributes (variety, growth and development, special high moments) and the overemphasized negative attributes (secondary risk factor for associated health problems, transfer of inability to cope with stressors). Like many prior researchers, he attempts to formally define the stress response by examining factors relating to the environment, characteristics of the individual, and a combination of these. He proposes his own definition that includes the response to the task/situation, the level of enjoyment, and the resulting development or deterioration in the individual. Through some exercise-based and psychological examples he also tries to differentiate between a stressful and nonstressful response.


**Organizing Stress Research**

Diane Gill provides a current review of the conceptual models and frameworks that have guided research on stress in sport psychology and examines dominant research trends in the last 30 years. She adopts the Lazarus (1986) model of stress in which perception/appraisal of the stressor becomes the key ingredient in provoking a stress response. This model focuses on the relationship between interdependent variables rather than isolating independent and dependent variables. Emotions and stress are seen as overlapping constructs that need to be investigated in sport, rather than isolated concepts like anxiety. She leads us through a competent historical review of anxiety research in sport, and identifies new trends in exercise and health-based investigations. Stress intervention models are briefly noted, and future directions are discussed, including process-oriented, longitudinal research on emotional processes in social contexts.


**How Little We Know About Stress**

In this comprehensive review article, Rod Dishman examines the biopsychological basis of exercise effects on stress (e.g., neuroanatomy and biochemical processes). In the introduction, he summarizes the work of early researchers like...
Meyer, Selye, and Frankenhauser. Additionally, he points out many of the design and methodological flaws in recent correlational research and basic models examining exercise and depression, anxiety, and stress. The remainder of the article presents a deeper, biopsychological review of the evidence regarding these effects and the adequacy of the models that have been used to date to explain possible consequences. His conclusions regarding the role of brain monoamine processes (norepinephrine, serotonin, dopamine) and the hypothalamic-pituitary adrenal axis in exercise effects are equivocal. He presents a wealth of experimental data and a variety of research directions for adventurous investigators to follow.


**Arousal and Performance Revisited**

This review examines the research findings investigating the arousal–performance relationship. The author wisely avoids reviewing past and current theories explaining this relationship, as other excellent reviews are already written. Instead he looks at individual differences, task and situational factors, and research trends to date. In the introduction, he makes the usual attempt to sort out the differences in operational definitions of anxiety, arousal, stress, and performance. However, his main analysis involves an examination of trait anxiety, athlete characteristics, and task and situational characteristics. An additional brief examination of stress management techniques suggests that they have potential for use by practicing sport psychologists. The final sections summarize the prior research trends in the literature and offer implications for practitioners and future research.


**Exercise for Stress Management**

This is a traditional review of the beneficial psychological effects of exercise. Berger begins with basic definitions of various types of stress following Selye’s model and incorporating Lazarus and Folkman’s (1984) emphasis on perception. After a brief discussion of the psychological benefits of exercise, she introduces a new taxonomy of exercise-type factors (mode, practice) that may mediate its stress-reduction capabilities. She rightly points out the inherent difficulties of measuring changes in self-concept from exercise and examines the difficulties in identifying psychophysiological changes resulting from exercise. She concludes by offering several paths for future research, examines how research findings can affect physical education practitioners, and suggests that exercise can fulfill social needs.


**Getting the Facts Right**

In this reaction paper, Landers critically presents his views on research trends and models presented by the other authors in this special issue. He attempts to improve upon Franks’ definitions of stress by invoking differential effects of
stressor types as pointed out by Chrousos and Gold (1992). He also presents evidence to show why he disagrees with Berger’s conclusion that competition interferes with stress reduction. Furthermore, he critiques her taxonomy of exercise factors by examining data from his previous meta-analyses on the psychological effects of exercise. In a constructive manner, Landers expands on mediating factors (e.g., hostility) in Plowman’s review that seem to impact in Type A research. He also takes Wrisberg to task for unequivocally accepting the multidimensional theory of anxiety and provides several studies to show nonsupport. On the positive side, he suggests some innovative research approaches to examining task characteristics as mediating factors in the inverted-U hypothesis. Finally, in probably the most powerful supporting section he presents, he questions how Dishman can reject the findings of numerous meta-analyses and reviews that show beneficial effects on anxiety, depression, and stress reactivity. He also wonders how Dishman can give priority to a monoamine explanation when the review chart Landers presents clearly shows that many other explanations are highly viable. Landers concludes with specific recommendations for future studies.


**Using POMS With Cardiac Rehabilitation**

Psychological variables influence recovery from heart attacks and warrant assessment of the patient’s perceptions of health and well-being. The purpose of this study was to examine the effects of brief cardiac rehabilitation on anxiety, depression, and scores on the Profile of Mood States (POMS) after acute myocardial infarction (AMI). A total of 187 patients with mild-to-moderate depression and anxiety were randomized within 6 weeks of AMI to usual care control and brief cardiac rehabilitation groups. Treatment included supervised exercise, low-level exercise prescriptions, and group-based behavioral and risk-factor management training. Subjects were administered the Beck Depression Inventory, Spielberger State Anxiety Inventory, and the POMS within 6 weeks of AMI, after the 8-week rehabilitation, and 12 months following the cardiac event. After the 8 weeks of rehabilitation, the treatment group had significantly lower scores on tension-anxiety and depression-dejection and higher scores on vigor-activity, although the difference between the groups on vigor was less than 20% of the standard deviation. There were greater improvements in POMS scores for patients with higher mean anxiety and depression scores. However, although there were significant improvements in depression and mood states after 12 months, there were no significant differences between groups. A natural history of recovery despite treatment is suggested.


**The Body in Special Pedagogy**

The purpose of this study was to investigate what knowledge and learning dimensions are to be found in physical education, as well as to describe the characteristics
of the relation between the body, physical activity, and self-concept. The article is a summary from a doctoral thesis. The first part is the development of a theoretical model for using physical activity in special pedagogy, based on body phenomenology and self-concept theory. The empirical part is a study of 44 physically disabled children (age 10–14 years) going through a rehabilitation program with physical education. Both qualitative and quantitative methods were utilized. The quantitative analyses showed that the social dimension influenced the physical–motoric, as well as the physical–social self-concept. This is further supported by the qualitative analyses. It was also demonstrated that the children improved their competence and knowledge, but the importance of basing the program on the social and cultural context for the individual child was evident.


Personal Factors in Athletic Performance

Intrapersonal (e.g., intrinsic motivation) and interpersonal (e.g., social support) factors are important for athletic performance. It is theorized that the layer immediately surrounding an athlete’s inner core of psychological functioning consists of four intrapersonal factors: self-motivation, cognitive capacity and coping skills, affective orientation, and mental training skills. The layer surrounding these factors is comprised of interpersonal factors, such as social support and the athlete–coach relationship. A theoretical model proposes that competition-generated intrinsic motivation and social support are the two main properties of athletic competition that buffer against increased stress. This in turn increases adherence and performance. Coaches are encouraged to foster these resources by stimulating autonomous self-regulation.


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