



Wayne State University

Kinesiology, Health and Sport Studies

College of Education

12-1-1994

The Relationships Among Competitiveness, Age and Ability In Distance Runners

Robert C. Eklund

University of Western Australia

Jeffrey J. Martin

Wayne State University, aa3975@wayne.edu

Alan L. Smith

Recommended Citation

Martin, J. J., Eklund, R. C., & Smith, A. L. (1994). The relationships among competitiveness, age, and ability in distance runners. *Journal of Sport Behavior*, 17(4), 258-267.

Available at: http://digitalcommons.wayne.edu/coe_khs/37

This Article is brought to you for free and open access by the College of Education at DigitalCommons@WayneState. It has been accepted for inclusion in Kinesiology, Health and Sport Studies by an authorized administrator of DigitalCommons@WayneState.

NOTICE IN COMPLIANCE WITH PUBLISHER POLICY: This is a reconstructed and formatted version of an article originally published in *Journal of Sport Behavior*, 17(4), 1994, 258-267. Paging renumbered for this copy. Copyright © 1994 Journal of Sport Behavior, University of South Alabama. Archived by permission.

The Relationships Among Competitiveness, Age and Ability In Distance Runners

Robert C. Eklund, Jeffrey J. Martin, and Alan L. Smith

Abstract The purpose of this study was to examine relationships suggested by general achievement motivation literature and the popular literature in sport using the Sport Orientation Questionnaire (SOQ). The current study examined if faster runners are more competitive than slower runners, if older athletes were less competitive than younger athletes, and if faster runners were more goal oriented than slower runners. Distance runners ($n=80$), ranging from 10 to 61 years old completed race packets containing a cover letter, consent forms, the SOQ and a demographic questionnaire. Runners averaged 32.9 years of age and reported levels of competitiveness and goal orientation consistent with previous research. Results indicated that competitiveness and age were negatively related ($r = -.44, p < .001$) and competitiveness and personal best times for all race distances were positively associated ($r = .28, p < .05$ to $.33, p < .01$). Ability and goal orientation were unrelated. In conclusion, both ability and age, in addition to a variety of significant social and cognitive correlates, may contribute to the development and decline of competitiveness. Future research should examine the way that competitiveness and related cognitions develop and wane over the life span.

Achievement motivation has received much attention in the sport psychology literature (Roberts, 1992). In particular, Atkinson's (1964; 1974) theory of achievement motivation has been examined extensively (Gill & Deeter, 1988; Martin & Gill, 1991a). Achievement motivation research in sport, based on Atkinson's (1974) theory, has been made possible by the development of the Sport Orientation Questionnaire (SOQ) (Gill & Deeter, 1988). With the advent of the SOQ sport psychology researchers are able to investigate the sport specific form of achievement motivation; competitiveness. In addition, the SOQ also assesses competitive orientation, or the way in which athletes usually direct their motivation towards specific goals. The win orientation subscale assesses the degree to which athletes pursue outcome goals such as winning whereas the goal

orientation subscale indicates the degree to which subjects endorse performance or mastery goals such as trying to run a particular time.

Research using the SOQ has suggested that adolescent male runners are more competitive than females (Martin & Gill, 1991a) and that American, Filipino, and Taiwanese athletes report similar levels of competitiveness (Kang, Gill, Acevedo, & Deeter, 1990; Martin & Gill, in press). In addition, competitiveness has distinguished between students entering competitive and noncompetitive activity classes (Gill & Deeter, 1988; Gill & Dezwaltowski, 1988).

Unfortunately, research examining competitiveness has yet to look at important relationships predicted by achievement motivation theory and empirical questions suggested by anecdotal observations of sport and physical activity. Specifically, achievement motivation theory suggests that motivation is associated with behavior choice, intensity, and persistence. In a sporting context, for example, athletes who consistently seem to play hard and rarely concede defeat are often described as highly motivated or "competitive" by the media. Ultimately, these types of athletes are thought to perform better than their peers, in part, because of their competitive attitude. Thus, the first purpose of the current study was to examine the relationship between the sport specific form of achievement motivation; competitiveness, and running success. Stated differently, are faster runners more competitive than slower runners?

Anecdotal evidence also suggests that older athletes may be less competitive than younger athletes. For instance, popular literature often suggests that older athletes suffer performance decrements partly because they have become less competitive or have redirected their competitiveness to other avenues. Thus, the second purpose of the present study was to determine if competitiveness and age were negatively related in distance runners.

Finally, applied sport psychologists often advocate performance goals, which a goal orientation provides, on the belief that they lead to superior performance (Burton, 1989; Gould, 1986). Goal oriented athletes tend to focus on performance goals and work by Vealey (1986) suggested that elite figure skaters strongly endorsed a performance orientation. Holding such an orientation helps athletes focus on realistic and controllable performance goals which promotes self-confidence and reduces cognitive anxiety. However, no research has examined if goal orientation and ability are related in runners. Thus, the third purpose of

Competitiveness, Age, and Ability in Distance Runners

the current study was to examine if a goal orientation was positively associated with ability. In other words, are faster runners more goal oriented than slower runners.

Methods

Subjects

Recreational and competitive ($n=80$: male=58; female=22) distance runners from 2 running clubs located in the southeastern USA participated in the study. Runners ranged in age from 10 to 61 years in the following age groups; 10-19 yrs, $n=5$; 20-29 yrs, $n=23$; 30-39 yrs, $n=32$; 40-49 yrs, $n=15$; and 50-61 yrs, $n=5$.

Procedures

The first author distributed race packets containing a letter describing the purpose of the study, human subject consent forms, the SOQ and a demographic questionnaire to adult runners at a monthly running club meeting. Younger runners from the same city, involved in a summer track and field program, were mailed the same packet and self-addressed stamped envelopes.

Instruments

Sport Orientation Questionnaire. The SOQ has three subscales which assess competitiveness, goal orientation, and win orientation and the first two scales were used for the present study. Test-retest (.73 to .89) reliability, internal consistency (.79 to .95) and construct and concurrent validity have been adequately demonstrated (Gill & Deeter, 1988).

Ability and Age

Runners reported both their age and personal best times for the 1 mile, 5 and 10 kilometer and marathon distance. These personal best times were used as measures of ability.

Results

Descriptive data was examined first followed by an examination of the correlations among competitiveness and goal orientation, and runners

personal best times and their age.

Descriptive Data

The average runner was of adult age ($M=32.9$) and ranged from 10 to 61 years of age ($SD=10.4$). Thus, approximately two-thirds of the sample were in the 22 to 43 age range. As a group they were quite experienced having trained and raced for a number of years. Similar to previous research these runners were competitive ($M=53.8$, $SD=8.3$), and goal oriented ($M=27.0$, $SD=3.4$).

Table 1. Descriptive Data

Measure	Mean	SD
Age	32.9	10.4
Years run	11.8	6.0
Miles run per year	1715.0	1192.4
Races run per year	10.1	6.3
SOQ		
Competitiveness	53.8	8.3
Goal Orientation	27.0	3.4

Correlational Results

Table two reveals the results of analyses conducted to examine the hypotheses. The first hypothesis was supported as competitiveness and age were negatively related ($r = -.44$, $p < .001$). Hypothesis two was examined via correlations among competitiveness and personal best times at various distances. As can be observed in Table 2, competitiveness and personal best times for all race distances were significant.

The varying number of subjects in each analysis was a result of many younger runners having not competed in marathons and some older runners having not competed in the one mile run. Lastly, the third hypothesis was not supported as ability and goal orientation were unrelated.

Table 2. Correlational Data for Ability, Age, Goal Orientation and Competitiveness

Personal Best Time	Comp	Goal	<i>n</i>
1 Mile	.33**	.23	63
5K	.30**	.14	65
10K	.31**	.15	64
Marathon	.28*	.00	46
Age	-.44*	-.05	80

* $p < .05$; ** $p < .01$

Discussion

The purpose of the present study was to examine hypotheses generated by achievement motivation literature, popular literature and sport psychology writings. Specifically, this study examined three questions: Are accomplished runners more competitive than less accomplished runners? Are older runners less competitive than younger runners? and, Do faster runners hold a goal orientation more strongly than slower runners?

First, descriptive data indicate a pattern of SOQ scores consistent with previous research (Gill, 1993). For instance, competitiveness and goal orientation scores were all similar to those reported for high school runners (Martin & Gill, 1991a), Filipino marathoners (Martin & Gill, in press), and collegiate athletes (Gill & Dzewaltowski, 1988). This result adds further support to the generalizability of the competitiveness motive in sport and physical activity.

Second, consistent correlations for each distance indicate that runners having faster personal best times WERE also more competitive. Faster runners indicated a stronger desire to achieve success and satisfaction in running compared to runners with slower personal best times - Competitiveness should contribute to optimal performance through increased effort, intensity and perseverance towards race goals (Burton, 1989). For instance, competitive runners have important competitive race

goals (Martin & Gill, in press), think about their goals during races and use their goals to develop race plans (Martin & Gill, 1991b).

In addition to a dispositional variable such as competitiveness, social cognitive theory (Bandura, 1988) suggests that specific cognitions, behavior, and environmental factors all exert reciprocal influences. It is likely that competitiveness is one of a constellation of psychological factors contributing to successful performance. For example, superior running performance is associated with self-confidence (Martin & Gill, 1991a) and anxiety (Gould, Tuffey, Hardy, & Lochbaum, 1993) which, in turn, are predicted by factors as varied as perceived readiness, altitude towards previous performance, goals, and the external environment (Jones, Swain, & Cale, 1990). Situational influences also effect psychological development (Bandura, 1986) and it is likely that competitive runners seek out more competitive races (Gill & Deeter, 1988) which contribute to fast performances (Gill, 1986). Finally, perceptions of limited ability may also contribute to reduced competitiveness as runners see their competitive goals as unattainable.

The current study supports anecdotal reports indicating accomplished athletes are more competitive than less accomplished athletes with a sample of runners. However, characterizing less successful athletes as needing to become more competitive in order to be successful ignores the complex interaction of psychological dispositions and cognitions, and physiological and environmental factors which contribute to competitiveness and performance.

The popular media suggests older athletes suffer performance decrements because they lose their competitive edge as well as their physical gifts. It is well known that with advancing age the physiological mechanisms responsible for long distance running success operate less optimally than during the younger years (Noakes, 1991). The results of the present study indicate that older runners are less competitive than younger runners. Similar to the ability and competitiveness relationship it may that as older runners start to run slower they experience less success and become less competitive. At the same time, the reduced competitive motive contributes to less successful race experiences.

It is also likely that other factors influence the above relationships. For example, incidents of running injuries increase with age and limit competitive opportunities (Noakes, 1991) and as athletes age they encounter career and family decisions uncommon at younger ages that

Competitiveness, Age, and Ability in Distance Runners

often lead to reduced involvement in sport (Orlick, 1990). Competitiveness reflects the degree to which the general achievement motive is directed to sport. Clearly, athletes can redirect their achievement motivation to non-sporting activities that also provide opportunities to evaluate one's performance against salient standards and to derive success and satisfaction (Spence & Helmreich, 1983).

Lastly, although this study captured a linear relationship between age and competitiveness a curvilinear relationship may more accurately depict life span development of competitiveness. For example, Atkinson (1964, 1974) and others (Heckhausen, 1967; Hetherington & Park, 1993; Weiner, 1980) suggest that the achievement motive develops throughout early childhood and wanes in old age. The current study may capture the linear portion of a curvilinear relationship by not examining runners younger than 10 years of age and older than 61 years.

In conclusion both ability and age likely contribute to the development and decline in competitiveness in an indirect manner. Ability, age and competitiveness and their significant social cognitive and situational correlates mentioned earlier reciprocally influence each other in complex ways. Future research should examine the antecedents of competitiveness, how competitiveness and related cognitions develop over the life span and finally, what factors are related to a reduction in the competitiveness motive.

References

- Atkinson, J. W. (1964). *An introduction to achievement motivation*. Princeton, NJ: Van Nostrand.
- Atkinson, J. W. (1974). The mainsprings of achievement oriented activity. In J. W. Atkinson & J.O. Raynor (Eds.), *Motivation and achievement*. Princeton, NJ: Van Nostrand.
- Bandura, A. (1986). *Social foundations of thought and action*. Englewood Cliffs, NJ: Prentice Hall.
- Burton, D. (1989). Winning isn't everything: Examining the impact of performance goals on collegiate swimmers' cognitions and performance. *The Sport Psychologist*, 2, 105-132.
- Gill, D. L. (1986). *Psychological dynamics of sport*. Champaign, IL: Human Kinetics.
- Gill, D. L., & Deeter, T. E. (1988). Development of the sport orientation

- questionnaire. *Research Quarterly for Exercise and Sport*, 59, 191-202.
- Gill, D. L., & Dzewaltowski, D.A. (1988). Competitive orientations among intercollegiate athletics: Is winning the only thing? *The Sport Psychologist*, 2, 212-221.
- Gill, D. L., (1993). Competitiveness and competitive orientation in sport. In R.N. Singer, M. Milledge, & L.K. Tennant. (Eds.). *Handbook of research on sport psychology* New York, NY: Macmillan.
- Gould, D., & Tuffey, S., Hardy, L., & Lochbaum, M. (1993). Multidimensional state anxiety and middle distance running performance: An exploratory examination of Hanin's (1980) zone of optimal functioning hypothesis. *The Journal of Applied Sport Psychology*, 5, 85-95.
- Gould, D. (1986). Goal setting for peak performance. In J. M. Williams (Ed.), *Applied sport psychology: personal growth to peak performance*. Palo Alto, CA: Mayfield.
- Heckhausen, H. (1967). *The anatomy of achievement motivation*. New York, NY: Academic.
- Hetherington, E. M., & Parke, R. D. (1993). *Child psychology: A contemporary viewpoint*. New York, NY: McGraw-Hill, Inc.
- Jones, J. G., Swain, A., & Cale, A. (1990). Antecedents of multidimensional competitive state anxiety and self-confidence in elite intercollegiate middle-distance runners. *The Sport Psychologist*, 4, 107-118.
- Kang, L., Gill, D. L., Acevedo, E, & Deeter, T. (1990). Competitive orientations among athletes and non-athletes in Taiwan. *International Journal of Sport Psychology*, 21, 146-157.
- Martin, J. J. & Gill, D.L. (in press). Competitive orientation, self-efficacy, and goal importance in Filipino Marathoners. *International Journal of Sport Psychology*.
- Martin, J. J., & Gill, D. L. (1991a). The relationships among competitive orientation, sport-confidence, self-efficacy, anxiety, and performance. *Journal of Sport and Exercise Psychology*, 13, 149-159.
- Martin, J. J., & Gill, D. L. (1991b, June). *The relationships among competitive orientation confidence, goal choice, competitive cognitions and performance*. (Paper presented at the North American Society for the Psychology of Sport and Physical Activity annual conference, Asilomar, CA).
- Noakes, T. (1990). *The lore of running*. Champaign, IL: Leisure.
- Orlick, T. (1990) *The pursuit of excellence*. Champaign, IL: Leisure.
- Roberts, G.C. (1992), *Motivation in sport and exercise*. Champaign, IL: Human Kinetics.

Competitiveness, Age, and Ability in Distance Runners

- Spence, J. T., & Helmreich, R. L., (1983). Achievement related motives and behaviors. In J.T. Spence (Ed.), *Achievement and achievement motives* (pp 7-74). San Francisco, CA: W.H. Freeman.
- Vealey, R. S. (1986). Conceptualization of sport-confidence and competitive orientation: Preliminary investigation and instrument development. *Journal of Sport Psychology*, 8, 221-246.
- Weiner, B. (1980). *Human motivation*. New York, NY: Holt, Rinehart & Winston.