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When Anxiety Is Not Always a Handicap in Physical Education and Sport: Some Implications of the Defensive Pessimism Strategy

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In this article we present a defensive strategy that individuals may use to cope with sporting events in that they present the possibility of failure and potential threat to self-esteem. Previous research has indicated that failures in sport and educational contexts are related to high anxiety and low self-estimates of ability. The defensive pessimism strategy lead anxious people to perform well in a risky situation by managing their anxiety as motivation. Defensive pessimists may use low expectations to cope with their anxiety so that it does not become debilitating. Decreasing strategic expectations may help individuals negotiate sporting events by intensifying reflectivity about possible negative outcomes, and increasing effort to reinforce the task focus. But defensive pessimists possess a cognitive flexibility that leads them to use their preferred strategy in risky situations and to select in their repertoire another strategy when failure is unlikely. These data showed that the effects of high anxiety and low expectations on performance may be mediated by the strategy use. That is why the users of defensive pessimism perform as well as strategic optimists, who report lower anxiety and higher expectations of success.

Key Words: defensive pessimism, strategic optimism, anxiety, expectations, performance

Key Points:

1. Previous research has indicated that anxiety and low expectations may lead to performance deficits in situations that threaten self-esteem.
2. Anxious individuals are able to mobilize strategically the risk of failure in sporting events by harnessing their anxiety as motivation.
3. Defensive pessimists possess a cognitive flexibility and can select the strategy best adapted to their goals and the situation.
4. Defensive pessimists perform as well as optimists by intensifying their reflection and effort to avoid the debilitating effects of anxiety.

When athletes undertake a sporting event, they usually have an idea of how they will perform. Deficits in sport performance are often associated with chronic achievement anxiety and uncertain self-estimates of personal worth among young people, which generally lead to self-handicapping or avoidance behaviors. Success leads participants to feel typically less anxious and in control of their own outcomes. Some individuals are thus optimistic, and optimism seems to be more beneficial than other strategies (1). Optimists have confidence in their ability and

expect to do well. By contrast, pessimists generally doubt their ability and fear the worst. However, pessimism can have positive consequences under some conditions. An adaptive form of pessimism, used when the fear of failure is strong but when the desire for succeeding is important, was highlighted by Norem and Cantor (7, 8): *the Defensive Pessimism Strategy*. Defensive pessimism can be distinguished from self-handicapping strategies. If users of the two strategies generally both report low self-esteem and high anxiety, defensive pessimists do not withdraw effort or adopt handicaps in response to their negative affects (7, 22).

Research and Theory

Typically, defensive pessimists initially feel anxious and out of control even if they had done well in a similar situation in the past. Their pessimism is described as defensive because there is an inconsistency between these individuals' past good performance and their low expectations for future success (21). By "harnessing" their anxiety as motivation, the strategy seems to help them gain a feeling of control, and they perform quite well, contrary to their pessimistic predictions (6). For Showers and Ruben (19), this "defensive" pessimism comprises a strategic aspect because it serves two goals: (a) preparing for the possibility of failure (self-protective goal), and (b) increasing preparation and effort to enhance the probability of doing well (motivational goal).

Defensive pessimists are able to contain the negative effects of anxiety and perform better when allowed to work worst-case scenarios (10). This strategy thus enables them to focus more fully on the task at hand. According to Thompson and Le Fevre (21), there are two paradoxes: (a) low expectations would not necessarily lead to self-fulfilling prophecies, and (b) anxiety would not disrupt performance because defensive pessimists are able to canalize their state anxiety as motivation. Moreover, Showers (18) showed that defensive pessimists become more powerful in situations where their attention is focused on negative affects than in situations where focusing relates to positive ones. But the most important role of this strategy consists in engaging in a system of thoughts, where the anticipation of the negative aspects prevents a positive rebuilding of the act in particular after failure (16). Further negative mood facilitates the use of defensive pessimism and subsequent performance whereas positive mood interferes with it (17). Norem and Illingworth (10) suggested that the strategy "functions as a way for them to acknowledge their apprehensions and negativity and then cognitively work through it" (p. 823). It seems that positive mood interferes with defensive pessimists' reflectivity prior to the task and makes them more vulnerable to the disruptive effects of anxiety. Interference with the expectation-setting process led to poorer performance for the defensive pessimists (10).

Data suggested that this strategy helps defensive pessimists to manage their competitive state anxiety. Norem (6) also supposed that they report a high trait anxiety. Most of the research on defensive pessimism revealed that defensive pessimists were more anxious than strategic optimists (8, 10, 19). This anxiety would come from the low global self-esteem level reported by defensive pessimists, according to the research on self-esteem, which revealed that lower self-esteem is often associated with a high level of anxiety (4, 14, 21). Norem (6) suggested that defensive pessimism is a useful strategy for anxious individuals.

Measurement of Pessimistic and Optimistic Strategies

In order to select users of strategic optimism and pessimism in sport environments, we have elaborated an adapted French version of the Norem and Cantor's Optimism-Pessimism Prescreening Questionnaire (OPPQ; 7). Difficulties in using Norem and Cantor's version among sport participants had led us to elaborate a 13-item valid questionnaire describing pessimistic expectations and their presumed opposites (QPOP; 13; see Table 1). That is, there were six questions about optimistic sport expectations and six questions about pessimistic sport expectations. This choice was understandable by focusing on the negative thinking that had been observed among individuals using defensive pessimism (10, 16, 19).

In line with Norem and Cantor's (7) procedures, we assumed that optimistic expectations were the opposite of pessimistic expectations, just as thinking about positive outcomes seemed the natural opposite of thinking about negative outcomes. We thus considered expectations about performing well to be an optimistic item and expectations about performing poorly to be a pessimistic item. Factor analyses of the QPOP showed that all the items load satisfactorily on two correlated factors labeled *Optimism* and *Pessimism.* Table 1 indicates which items load on the Optimism factor and which items load on the Pessimism factor. The Optimism and Pessimism subscales had a good reliability; Cronbach's alphas were .79 and .80, respectively. In a study of French athletes, the QPOP showed a 1-month test-retest reliability of $r = .70$ ($N = 91$) between two sporting events.

According to Norem and Cantor's (7) theory, an "Optimism-Pessimism" score was computed for each subject by subtracting the sum of their endorsement of the pessimistic items from the sum of their endorsement of the optimistic items. Subjects who score 20 and greater or –1 and lower, and who strongly endorse an additional item ("So far I have generally done well in sport situations" with a score of 5 or greater in a 6-point scale), are supposed to use optimistic strategies or defensive pessimism, respectively. Subjects in the middle of the distribution (scores

Table 1 Prescreening Questionnaire of Optimism (O) and Pessimism (P)

1----------2----------3----------4----------5----------6	
Not at all	Very true
true of me	of me

Please indicate how true this statement is of you, in sporting events.

When I go into sporting event:

….1. I expect to do well (O).
….2. I expect the worst (P).
….3. I have generally positive expectations about what I will do (O).
….4. I feel really anxious (P).
….5. I expect the best of this competition (O).
….6. I often think about possible bad outcomes (P).
….7. I often think about a best performance (O).
….8. I often worry that I am not prepared to this competition (P).
….9. I think I am the best (O).
….10. I often worry that I will perform very poorly (P).
….11. I often think that I will perform very well (O).
….12. I often think about how I will do feel if I poorly (P).
….13. So far I have generally done well in sport situations.

between 0 or 19 on a range of possible scores from +30 to –30) are classified as aschematic with respect to these two strategies.

When using the scale for prescreening, item 13, which asks about previous performance in sporting events, has been used to distinguish realistic pessimists from defensive pessimists. In line with Norem and Cantor's (7) assumptions, we suggested that those individuals who have done badly in the past are realistic when they predict that they will do poorly in the future. In contrast, individuals who report having done well in the past are being defensive if they predict that they will do badly in the future. These suggestions were congruous with theorizing that defensive pessimists acknowledge their effective success, but that their strategy includes considerable anxiety and uncertainty and that it is likely to have a negative influence on construction of future situations (6). This item also allows some discrimination of individuals who appear unrealistically optimistic. These subjects report having done badly in the past but expect to do well in the future. In physical education, about 20% of the participants are prescreened to use pessimistic strategies (7% prescreened as defensive pessimists), when 18% are supposed to use optimistic strategies (15% prescreened as optimists).

Other data attest to the validity of the QPOP. Research using the QPOP revealed that pessimistic individuals report lower self-esteem and higher state anxiety than optimistic participants and tend to perform more poorly on an experimental sporting event. It is also consistent with reports of an inverse relationship between self-esteem and anxiety (4). They have also low self-estimates of ability than optimists, and they seem to protect their self-esteem by increasing their expectations of positive outcomes (13). In a similar vein, analyses showed that defensive pessimists report lower self-esteem than optimists but higher than pessimists (11). The role of gender should be noted in the relative proportions of pessimistic and optimistic strategies among athletes. Data suggested that for those classified as pessimists, the greater proportion was female (75% vs. 25%), while for strategic optimists the greater percentage were male (73% vs. 27%). We thus supposed that females may be more likely to use pessimistic strategies than males, with males more likely to choose optimistic strategies to cope with sporting events and physical education. The fact that females elect pessimistic strategies or defensive pessimism is consistent with reports of self-esteem, which suggested that females were significantly lower in global self-esteem than males (2).

It should be noted that the items included in the QPOP are specifically concerned with sporting situations. This is because individuals likely to use these strategies possess a cognitive flexibility. So, defensive pessimism and strategic optimism are not considered to be broad cognitive traits. According to Norem and Cantor (7) both are described as strategies precisely because it is believed that they can be used strategically in different situations, depending on context-specific goals. Indeed, people using defensive pessimism in sport environments do not necessarily use it in academic or social contexts. In line with Norem's (6) explanations, the QPOP is thus intended to measure sport and educational specific-domain strategies. But this questionnaire may be used among adults as well as young participants. It seems that 12-year-old young people are able to choose in their repertoire the strategy most adapted to their goals and to the situation (11).

Defensive Pessimism and Situations

According to Norem (5), individuals seem to pursue personally relevant goals and to resort to a panel of strategies describing coherent patterns of expectations, appraisal, planning, effort, and retrospection. These findings suggested that defensive pessimism is just one of a number of strategies individuals have in their repertoire, and it would be used to avoid the negative implications of failure. For Thompson and Le Fevre (21), "When the level of ego threat is low, when failure is not particularly important to self-worth, strategy use is relatively unlikely" (p. 888).

Research revealed that relaxation imagery and induction of positive thoughts seem to disturb those who generally have worse outcomes than when the task is considered threatening (10, 20). Defensive pessimists seem to perform better in a coping imagery condition than in the other two. For Norem (6), coping imagery closely resembles defensive pessimists' reflectivity prior to an upcoming performance. These data suggested that defensive pessimists were relatively debilitated in conditions that did not fit their preferred strategy and did relatively well in conditions that facilitated the use of defensive pessimism. But Sanna (17) supposed that the repetition of the task can moderate effects of defensive pessimism strategy, which can rebound from poor performances by using successful coping strategies.

We predicted that resorting to the strategy of defensive pessimism can be effective in educational and sport contexts and more particularly in self-estimates threatening sporting events (12). These situations are characterized by uncertainty of successful outcome. A potential failure may be not only attributed to temporary malleable aspects of individuals or settings but also to important personal dispositions such as ability or competence (15). Some participants may perceive the competitive and evaluative aspects of the event as threatening and respond with higher levels of competitive anxiety. Defensive pessimists were placed alternately in four conditions using a complete randomized block design: competition, training, external reward, and encouragement. In competition settings, reflecting prior to an upcoming outcome had positive effects on performance. Low expectations did not become a self-fulfilling prophecy, because subjects performed in sporting event as well as in training (where they were alone). These findings suggested that the defensive pessimism is a functional strategy in a sporting event for individuals who easily become anxious.

Because of this anxiety, it is temping to think that defensive pessimists need to be calmed down and reassured. Most people think that it is necessary to help them become more optimistic (9). But according to Norem and Cantor's (8) assumptions, encouragement setting may have put participants into a positive mood, because low expectations did not facilitate the performance. Forcing defensive pessimists to focus on positive outcomes before performing may have induced changes in participants' preferred strategy. They would be able to select optimistic strategies (9). In the same way, external reward setting was constructed to induce individuals to select a face-saving strategy before they start. We suggested that the task difficulty led subjects to reduce effort and task persistence, and to create a face-saving excuse for having done poorly. The pattern of results tends to support the argument that defensive pessimists have used a strategy to reduce cognitive interference (12, 21). Even if defensive pessimists performed with equivalent results than in other conditions, they did not use their preferred strategy despite a high state anxiety (equal to anxiety level in competition setting).

It seems that, in sport environments, defensive pessimists could select the strategy that is the most appropriate to the situation. In sporting events, subjects' anxiety leads them to provide an effort to be powerful, by decreasing their expectations. But the results supported that the strategic choice interacted with the situation. Indeed, although the four experimental conditions were judged of equal importance, defensive pessimism was only used in the competition setting. It seems that defensive pessimists do not normally use their strategy, low expectations involving a poor performance, without taking conditions into account. We thus supposed that defensive pessimists could use their effective ability to realize sport settings without taking conditions into account, and that their ability could be used when the risk of failure was unlikely. But these findings revealed that if defensive pessimists have decreased their expectations in three of the conditions (competition, external reward, and encouragement settings), the strategy was effective in sporting event, which facilitated a particular task focus.

Defensive Pessimism and Strategic Optimism

As Norem and Illingworth (10) argued, defensive pessimists perform as well as strategic optimists in conditions that permit or facilitate the use of their preferred strategy. It seems that defensive pessimists would be able to overcome the focus on non-task-oriented stimuli and would become more task focused by using this strategy (8). Optimistic individuals tended to have more positive and fewer negative affects than defensive pessimists, even if the latter succeeded better. Eronen et al. (3) suggested that optimistic strategy turned out to be successful in the long run. It seems that users passed as many courses as defensive pessimists.

According to the above findings, we supposed that sporting events, where fear of failure was unavoidable, led defensive pessimists to increase their effort to "harness" their anxiety and to perform as well as optimistic students (12). Anxiety is often presumed to interfere with performance by directing limited intentional resources to non-task-oriented stimuli and by decreasing the attention available for the task (23). But as predicted, defensive pessimists reported high state anxiety and set low expectations to perform as well as strategic optimists in an experimental sporting event (12). Defensive pessimists have used their anxiety and their low expectations in a productive way. They took more time than optimists to train on the task in order to prepare for the test.

Experiments also revealed that defensive pessimists, despite their perseverance, perform equally well as strategic optimists. It seems that anxiety could debilitate the role of the training on the task during the sporting event. But the effort engaged to cope with the competition would be used in other circumstances. These results support the assumption that the defensive pessimism strategy would not be used to improve the performance but only to protect oneself from the negative effects of anxiety and to avoid failure. This strategy would allow the self to be protected from the potential blow of failure, but we suggested that the level of anxiety blocks the benefit effect of effort.

Both the affects results and the long-term data suggest that there are significant costs to defensive pessimism. Although they were the most successful in their studies, defensive pessimists were less satisfied with their academic achievement than strategic optimists (3). But if defensive pessimists were not satisfied in comparison with strategic optimists, they clearly paid

attention to negative feedback, and they were focused on improving their performance (17). Defensive pessimists are clearly able to "use" this feedback, and it seems that they would be more likely than strategic optimists to benefit from it. But it is also necessarily to consider that the relative costs and benefits of both strategic optimism and defensive pessimism may vary significantly across culture and context (9). Therefore, the existence of costs for defensive pessimism does not necessarily negate its advantages for anxious individuals who use it in terms of anxiety-management and subsequent performance.

Conclusion

Several different kinds of evidence reviewed here suggest that the defensive pessimism strategy seems effective to help anxious individuals to perform well in sporting events. These assumptions revealed that defensive pessimism refers to a strategy individuals may use to pursue important goals. This strategy is characterized by a decrease in expectations coupled with extensive reflection, and an increase in effort (perseverance during the preparation of the task). Research has typically contrasted defensive pessimism with strategic optimism (3, 7, 8, 10). Optimism refers to a strategy whereby individuals set optimistic expectations for their own performance and actively avoid extensive reflection. Defensive pessimists set unrealistic low expectations and reflect on all the possible outcomes they can imagine. Therefore, defensive pessimists develop more effort to facilitate the task focus.

Generally, defensive pessimists perform as well as strategic optimists, but both show performance decrements and increased anxiety when prevented from using their preferred strategies (21). Data also showed that defensive pessimists perform better when they are allowed to maintain their low expectations and reflect before the task. Their performance is impaired (and they feel more anxious) if that reflective process is disrupted (10, 12, 21). These assumptions showed the cognitive flexibility of defensive pessimists who can select the strategy that is best adapted to their goals and to the event.

In view to the above, it would seem that the possible negative outcomes involve the use of the defensive pessimism strategy. If this possibility is not observed (like in training setting) the expectations are not decreased, and we thus supposed that subjects limit their effort. In closing, the present research bears testimony to the utility of the defensive pessimism strategy in sporting events and physical education, to encourage anxious individuals to adopt this strategy to "work" with their anxiety in a productive way. But future research should be constructed to understand more fully the effective role of the defensive pessimists' effort and the costs and benefits of the strategy during educational and sport contexts.

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