

Young peoples' use of self-handicapping when faced with evaluative threat on a physical skill test

Dean Cooley PhD.
Faculty of Education
University of Tasmania
Tasmania, Australia

Self-handicapping refers to the process whereby people engage in self-defeating behaviours to proactively obfuscate the link between actor and outcome. Evaluative threat from either non-contingent success or failure is proposed to elicit episodes of self-handicapping. Furthermore each evaluative threat condition is associated with a specific form of self-handicap (effort withdrawal & self-reports of disruption to performance, respectively). This experiment used a stratified random sample of young people aged between 10 and 16 ($N= 250$), to explore differences in young peoples' use of different self-handicaps in response to different evaluative threats associated with a test of athletic skill. The study used an AXB design, with participants' exposed to a two test scenario with the opportunity to self-handicap after receiving bogus performance scores on the first test. Results showed there were significant differences between type of self-handicap and evaluative threat condition. After being exposed to one of three evaluative conditions (non-contingent success, non-contingent failure, & non-evaluative) after the first test, only young people aged over 13 who were exposed to non-contingent failure, reported experiencing significantly more performance impediments such as illness and sports injuries than participants in either the non-contingent success or non-evaluative conditions. Participants in the non-contingent failure condition reported that the impediments would have a significantly greater debilitating effect on their second test performance than participants in either the non-contingent success or non-evaluative conditions. This same pattern of results was not evident for the use of effort withdrawal as a self-handicap in any evaluative condition. The implications of these findings on how teachers and coaches use performance feedback are discussed.

Keywords: self-handicapping, evaluative self-reports or performance disruption, effort withdrawal.

Self-handicapping is a strategy designed to obfuscate evaluation of ability when performance uncertainty exists (Berglas, 1985). Individuals use such strategies to circumvent the implications of failure. The creation of performance uncertainty is proposed in two hypotheses (Jones & Berglas, 1978; Snyder & Smith, 1982) that outline the antecedent conditions. Each is associated with different types of evaluative threat, and subsequently, different types of self-handicapping responses. Nonetheless, there is limited research (Coudevylle,

Ginis, & Famose, 2008) to confirm each hypothesis for activities within the physical domain (i.e., sport), with existing research limited to adults.

Performance uncertainty is the agreed antecedent pathway underpinning episodes of self-handicapping. Specifically, theorists have highlighted two distinct pathways that lead to performance uncertainty and self-handicapping. Research supports that non-contingent success (Berglas & Jones, 1978; Higgins & Harris, 1988; Kolditz & Arkin, 1982) and unexplained failure (Smith, Snyder, & Handelsman, 1982; Smith, Snyder, & Perkins, 1983; Snyder, Smith, Augelli, & Ingram, 1985) are associated with self-handicapping. Moreover, within the literature the non-contingent success pathway is associated with behavioural self-handicapping (i.e., drug-use, effort withdrawal) and the unexplained failure pathway with claimed self-handicaps (i.e., self-avowals of illness or injury). These findings have been based on an experimental design whereby participants' performance certainty has been manipulated.

In tests of the non-contingent success pathway and the use of behavioural self-handicapping most researchers have followed the design outlined by Berglas and Jones (1978). In their design, the manipulation involved participants completing unsolvable test items on a sham test of intellectual ability. Subsequent to finishing a first test, some participants are given test scores that indicate success. Then before a second test, the participants are given an opportunity to engage in self-handicapping. Similar research designs have also been used to test the unexplained failure pathway and the use of claimed self-handicaps (i.e., Smith, et al., 1988). Typically, such research designs have used a pre-post measure of perceptions of control over the outcome to assess the effectiveness of the experimental manipulation.

Despite the large body of evidence associated with the use of self-handicaps in the physical domain, (Carron, Prapavessis, & Grove, 1994; Coudeville, et al, 2008; Hausenblas & Carron, 1996; Prapavessis & Grove, 1998; Rhodewalt, Saltzman, & Wittmer, 1984; Ryska, Yin, & Boyd, 1999; Ryska, Yin, & Cooley, 1998), none have used a design incorporating an experimental manipulation of performance uncertainty. This creates a number of shortcomings to this evidence. First, the association between different antecedents to performance uncertainty and self-handicapping is unclear for the physical domain. Thus it is unclear as to whether athletes use self-handicapping because they have experienced non-contingent success in previous performances and this subsequently cause performance uncertainty. Second, it is unclear if different antecedents associated with performance uncertainty results in individuals using different types of self-handicapping strategy. Thus, it is unknown if athletes will use behavioural self-handicaps such as effort withdrawal, and if so, under what antecedent conditions.

In terms of self-handicapping use in the physical domain, there has been little effort to describe any age differential unlike that in other achievement domains (Midgley, Arunkumar, & Urdan, 1996; Midgley & Urdan, 1995; Thill, 1993). Where it does exist it has produced mixed results (Elliot et al., 2006; Ryska, 2002). Evidence from other achievement domains has indicated that the use of complex strategies (i.e., cheating, excuse-making) may be restricted to individuals who have the cognitive maturity to understand their use. For example, cheating only seems to become a viable strategy when young people are able to comprehend that cheating will allow others to interpret their performances as being competent (Anderman, Griesinger, & Westerfield, 1998). Similarly, Boggiano and Main (1986) showed a relationship between age and the

ability to use attributions, with children aged 10 and under unable to effectively use attributions. There is a vast body of literature to support the premise for age effects in the use of causal schemes and the ability to differentiate between abstract concepts (i.e., Nicholls, 1976, 1978, 1983, 1984a, 1984b, 1989, 1990, 1992; Nicholls & Miller, 1984). This evidence has indicated that there are differences in the ability to differentiate abstract concepts because of age, with young people aged under 12 having difficulty in differentiating between abstracts concepts (i.e., ability & effort). At present it is unclear as to any age differentials in the use of self-handicapping within the physical domain.

The primary purpose of experiment one was to examine the two antecedent performance uncertainty pathways within the context of the physical domain. It was predicted that young people who experience performance uncertainty caused by non-contingent success on a first test of physical skill would have significantly fewer attempts at practice (effort withdrawal) before a second test of physical skill than individuals who experience performance uncertainty caused by non-contingent failure or individuals whose physical skill is not being evaluated. A second hypothesis was that young people who experience performance uncertainty caused by non-contingent failure on a first test of physical skill will report significantly higher performance disruption before a second test of physical skill than individuals who experience performance uncertainty caused by non-contingent success or individuals whose physical skill is not being evaluated. Based on the findings from experiment one, the primary aim of experiment two was to examine age differentials in the use of self-handicapping. Specifically, it was hypothesised that young people aged 10 would not use self-handicaps to obfuscate performance outcome.

Experiment One

Method

Participants

All participants ($N=240$) were enrolled in primary and secondary schools (males, $n = 170$ and females, $n = 170$). Students' ages ranged from 10 to 16 ($M = 14.5$, $SD = 1.1$). They represented some diversity concerning race: white Caucasian ($n = 146$), Australian Aboriginal ($n = 45$) Asian ($n = 37$), and European ($n = 12$).

Instruments

The Experimental Task.

Previous protocols (i.e., Berglas & Jones, 1978) have modified a bona fide test to increase the effectiveness of the experimental manipulation. Modifications have included unsolvable test items connected with unexpected outcomes. Typically, these sham tests have been linked to the domain of study (i.e., social intelligence test associated with self-handicapping in social situations). In this experiment, the task was a physical test of throwing ability. It was presented to participants as a talent identification instrument that had high reliability and validity in predicting athletic success. The task was modified by the inclusion of a target and a screen (1 metre high) to obscure the participants' view of their efforts. Participants had to throw a ball at a horizontal target five metres away, with the aim to score as many points as possible from five attempts. Scoring was based on the ball hitting one of five concentric rings that made up the target.

Experimental Manipulation.

Thompson (1993) indicated that two areas needed to be addressed when using sham test to prevent threats to external validity. First, unrealistic bogus scores on sham tests created threats to external validity. The sham test was piloted and scores were obtained to buffer against this threat (Cooley, 2004). Second, sham tests need to be modified to an extent where participants do not suspect the sham. The sham test needed to have a degree of novelty so that participants would not become suspicious of their deceptive performance scores. For example, students would be familiar with the over-arm throwing test and their previous performances. If they were to be exposed to the original test and given deceptive performance scores that indicated failure, they would suspect the sham. A problem with changing the original test is that this also posed some threat to external validity. For example, if modifications to the test changed the basis of success on the test so that outcomes were based on luck rather than ability, this may also raise participants' suspicions. The first was to obtain measures of reliability and face validity for the sham test to ensure that the modifications did not pose a threat to external validity. As the proposed populations for the remaining studies in this thesis were, young people aged between 10 and 16, the second aim was to collect performance data associated with the sham test to allow operational definitions for the feedback contingencies to be set for age and gender groups.

A Measure of Ego-relevance of the Physical Domain.

Self-handicapping is an ego-relevant strategy insofar as individuals do not use self-handicaps when outcomes have little relevance or are unimportant. Previous protocols (Carron et al., 1994; Hausenblas & Carron, 1996; Ryska et

al., 1999) have excluded participants who rated the domain as low in relevancy. A single item measure of ego-relevancy was used as a selection criterion. Participants rated the importance of achieving successful outcomes on tests of physical ability on a continuous scale with anchors at 1 (*not at all important*) and 9 (*extremely important*). Participants responded to the stem, "Think about when you are performing tasks that are related to sport and physical activity. How important are success outcomes to you?" As per the Carron, et al. (1994) protocol, high ego-relevance was defined as a score of 7 or higher. Those who scored less than 7, were excluded from the experiment.

Validation of the Experimental Manipulation.

Deceptive performance scores associated with attempts on the sham test served as the means of manipulating participants' perceptions of performance certainty. As participants were unable to discern their scores on the sham test, they relied on the researcher for performance scores. To manipulate performance certainty, the researcher gave participants scores equal to the 75th percentile (non-contingent success) or 25th percentile (non-contingent failure). All scores were delivered without any other feedback. Participants allocated to the non-contingent success condition faced performance uncertainty because they had unexpectedly succeeded on a new test where there was no explanation of why they had succeeded. Similarly, those allocated to the non-contingent failure condition experienced performance uncertainty because they had unexpectedly failure on the test without explanation. The following parallel test created the evaluative threat, as participants had no information as to what behaviour was needed to recreate the previous success or alter failure.

Typically, in most studies, the measure of success of the manipulation has occurred after the feedback contingency. Nonetheless, a single measure gives no indication of changes in perception of control. To obtain a clearer picture of the manipulation's effectiveness in changing participants' perceptions of control, pre-test and post-test measures of control were used. Participants in this study responded to the stem, "With regard to the upcoming test, how confident are you that you have control over the test outcome?" Control was measured on a continuous scale with anchors at 1 (*no control*) and 5 (*high control*). Participants completed the measure before test 1 and after the feedback contingency information. For participants in the non-evaluative condition, the word *trial* was substituted for *test* to reduce evaluative threat.

Measures of Self-Handicapping Strategies.

Claimed self-handicaps. In the first measure, self-handicapping involved a state measure similar to those used in previous self-handicapping research. Before a second test, participants reported any conditions (listed on a checklist) that may have hindered their performance on the upcoming test. To avoid exposing the nature of the first dependent variable to participants, the checklist was titled the Situational Impediments Checklist (SIC). Following existing protocols (Carron et al., 1994; Hausenblas & Carron, 1996; Ryska et al., 1999; Ryska et al., 1998), each impediment had two possible responses (Yes or No) and the amount of disruption that all checked conditions would have on their upcoming performances. Ratings were on a continuous scale with anchors at 1 (no disruption) and 100 (total disruption).

Behavioural self-handicapping. Within the context of a physical ability

test, a lack of preparatory effort has been defined as a behavioural handicap. Consistent with previous definitions (Rhodewalt et al., 1984), the behavioural handicap was termed as effort withdrawal. The operational definition for effort withdrawal was the number of practice attempts before the second sham physical skill test. The measure of effort withdrawal occurred in the five-minute break between tests and after the experimental manipulation of performance certainty. Students had the opportunity to practice the physical skill test between the two tests. The issue of publicity of self-handicaps deals with whether or not individuals use self-handicaps for their own benefit or for the audience (self-impression management). The aim of this investigation was not to assess the private versus public nature of self-handicaps. The first dependent variable was relatively private in nature as it was a written response. The practice attempts made by participants were also conducted in as private conditions as possible. At the start of the 5-minute break, participants were offered the opportunity to practice as often as they liked, but asked to remain in the testing area. I stayed in the area but pretended to complete other tasks, while counting the attempts at practice. A practice attempt was defined as a throw at the target.

Feedback Contingencies.

In this experiment, there were two levels of feedback contingency and one non-evaluative condition. Participants were randomly assigned to one of the three evaluative conditions by using a sheet of random numbers. In the first condition (*non-contingent failure*), participants received performance scores that indicated that their score was equal to the 25th percentile for their age and gender group. In the second condition (*non-contingent success*), participants received performance scores that indicated that their score on the first test was equal to the

75th percentile for their age and gender group. In the third condition (*control-non-evaluative*), participants received no information regarding their performances. Moreover, all references to testing and comparing of abilities were removed from the researcher's verbal and written instructions for the non-evaluative group. Information given to participants in the evaluative conditions indicated that there was to be an evaluation of both their physical ability and their future potential in sport. Participants in the non-evaluative condition were told that they were involved in a trial of a test of physical ability that was to be used in a later study.

Procedure

All participants were recruited through schools and sports clubs. A selection criterion of ego-relevance was used. Consent forms ($N = 322$) were returned to the respective schools and individuals who indicated that their performance outcomes on the physical skill test had little importance to them (score below 7) were excluded at this stage of the investigation ($n = 27$). Individuals who indicated that performance outcomes on the physical skill test were important to them were selected into the study by a random selection process. The random stratified selection process ensured that there were equal numbers in each evaluative condition, the total for each group ($n = 80$) was chosen from the results of a power analysis of earlier studies. All students not selected in the study ($n = 55$) received a letter informing them of the reasons for their non-selection and thanking them for their interest in the study. As the total number of students was low, the random selection process was not entirely random. For example, all 15 year old females were selected because only 30 consented. Other

low number groups were the 14 year old male group ($n = 36$) and the 16 year old female group ($n = 33$).

At a predetermined time and date, students met with the researcher to complete the sham physical skill test. All testing sessions occurred in a private area as possible. All participants received a package of inventories titled Feelings About Sport Questionnaire, which containing demographic self-report items, the pre-test measure of control, the SIC, and the post-test measure of control. To standardise the protocol, a prepared script of instructions and information was read out to students (Cooley, 2004). All participants were given differential information about the test. Participants allocated to the experimental conditions were told that the test was a predictive test of athletic ability and future athletic potential. They received instruction that their scores would be compared to normative data and that an evaluation of the future potential would be completed. Participants in the non-evaluative condition were told that their involvement in the test was to help develop new scores for the test. Instructions to participants in the non-evaluative condition contained no reference to the comparison of participants' scores to that of the performance data.

All participants received a demonstration of how to complete the test. All participants then completed the first control measure before beginning the first test. Immediately after the first test all participants received either their performance scores (non-contingent success and non-contingent failure) or no information about their performance (non-evaluative condition). All scores were deceptive. Participants received their deceptive first test performance scores on a piece of paper marked "Official Test Result". The result sheet also contained the age and gender relevant percentile scores for the participants. After the first test,

all participants were informed that they would have a five-minute rest period before completing the second test. Participants were told that they could have a practice at the test during the five-minute break or rest. During the break, the researcher pretended to be busy with paperwork but recorded the number of practice attempts by participants. After the five-minute break the researcher, instructed participants that the second trial would begin. Before starting the second trial the researcher asked participants to complete the SIC. Once the SIC had been completed the trial stopped and all participants entered the debrief phase. No student contacted the listed researchers or made representation to the researcher, parents, or the principals with concerns regarding the conduct of the study.

Design and Analysis

Multiple dichotomy and cross-tabulation analysis assessed differences in the frequency of male and female participants' reports of impediments. To assess the success of the feedback manipulation an analysis of covariance (ANCOVA) assessed differences in participants' perceptions of control across the feedback contingency conditions. In the model, the second measure of perception of control (post experimental manipulation) served as the dependent variable with the first measure (pre experimental manipulation) as the covariate. The three feedback contingency conditions, 3(non-contingent success, non-contingent failure, & non-evaluative control) served as the independent variables. To determine if a MANOVA or separate ANVOAs should assess the hypotheses, correlation between the dependent variables was assessed. There was no transformation of data as all data were within acceptable tolerance levels (Hair, Anderson, Tatham, & Black, 1995). Dependent variables were not correlated and

thus separate ANOVAs assessed each hypothesis with alpha adjustment. All statistical analyses were calculated with SPSS (2004).

A between-groups design was the primary means of assessing differences between the feedback contingencies and gender on each of the dependent variables. An analysis of variance (ANOVA) was used to test the research hypotheses. The model used feedback contingencies 3(non-contingent success, non-contingent failure, & control) with gender 2(male & female) as independent variables. The dependent variables were effort withdrawal and performance disruption. Estimates of power for a six group ANOVA indicated that a group size of 30 would be suitable to detect medium to large effect sizes with approximately 70 per cent power (Cohen, 1988).

Results

Perceived Impediments to Performance

Participants in the study gave an array of a priori excuses, with both males and females across all age groups citing “sports injuries” most frequently (42%), followed by a lack of motivation (38%), and late nights (33%). Interestingly, individual participants cited multiple handicaps. Of the total sample ($N = 240$), 86 participants did not report experiencing any of the listed impediments.

Validation of Performance Uncertainty

The definition of performance uncertainty adopted for this experiment related to a loss of control over test outcome. The intent of the experimental manipulation of performance scores was to cause individuals to experience performance uncertainty because of the non-contingency of the performance feedback scores. Before the first test, all participants reported having similar

confidence at being able to control the test outcome, non-contingent success ($M = 3.30$), non-contingent failure ($M = 3.13$), and control ($M = 3.12$). After exposure to the feedback contingencies, participants in the non-contingent success ($M = 2.61$) and non-contingent failure conditions ($M = 2.28$) reported having lower scores for control and participants in the non-evaluative control group condition reported an increase in scores for control ($M = 3.18$). The ANCOVA results showed a significant difference following the deceptive scores ($F = 38.71 (1, 240), p < .05, \eta^2 = .24$). Post hoc comparisons between the three feedback conditions showed that participants in the non-contingent failure condition differed significantly from participants in the non-evaluative condition ($p < .05$), and participants in the non-contingent success condition ($p < .05$) on the post measure of control. Participants in the non-contingent success condition also differed significantly ($p < .05$) from participants in the non-evaluative condition. It seems clear that the manipulation was successful in the expected direction.

ANOVA for the Main Effects of Feedback Contingency Conditions, Gender, and their Interaction

Descriptive statistics for the number of practice attempts and level of self reported performance disruption are presented in Table 1.

Table 1

Descriptive Scores for attempts and performance disruption as self-handicaps

Self-handicap	FBC	Gender	M (SD)
Practice attempts	Control	Male	4.95 (3.15)
		Females	4.67 (1.75)
	Failure (NC)	Male	4.97 (1.62)
		Females	4.94 (1.70)
	Success (NC)	Male	5.30 (3.10)
		Females	5.07 (1.80)
Performance disruption	Control	Male	8.50 (13.24)
		Females	14.30 (14.16)
	Failure (NC)	Male	26.77 (10.59)
		Females	25.75 (8.11)
	Success (NC)	Male	12.05 (14.67)
		Females	9.87 (13.02)

Note. FBC = Feedback Contingency Condition, NC = non-contingent

Reduced Practice as a Self-handicap

ANOVA results revealed no significant effect for the main effects of gender ($F(1, 234) = .31, p > .05, \eta^2 = .001$), feedback contingency condition ($F(2, 234) = .53, p > .05, \eta^2 = .005$), or their interaction ($F(2, 234) = .08, p > .05, \eta^2 = .005$).

Performance Disruption as a Self-handicap

ANOVA results for the testing the second hypothesis revealed a significant effect for the main effect of feedback contingency condition ($F(2, 234) = 38.82, p < .05, \eta^2 = .24$), such that the mean amount of performance disruption in the non-contingent failure condition was higher than the non-contingent success condition and the non-evaluative control condition. The main effect for gender ($F(1, 234) = .28, p > .05, \eta^2 = .001$), was not significant, nor the interaction effect ($F(2, 234) = 2.37, p > .05, \eta^2 = .02$).

Post hoc comparisons (Scheffé) indicated that the significant effect ($p < .05$) for feedback contingency condition was primarily due to participants in the non-contingent failure group reporting significantly more performance disruption than participants in both the non-evaluative control (Mean difference. = 14.86) and non-contingent success groups (Mean difference. = 15.83). Using Cohen's d (1988) as the measure of effect size, there was a large effect size ($d = 1.0$) between the non-contingent failure group and the non-evaluative group and between the non-contingent failure group and the non-contingent success group ($d = 1.1$).

Experiment 2

Method

Participants

Participants aged 13 were enrolled in high school and participants aged 10 were members of various sport clubs ($N = 80$, $n = 40$ males, $n = 40$ females). Mean age was 11.55 years ($SD = 1.15$). Recruitment from sports clubs occurred in a different district to recruitment from schools. All students were English speaking. The sample was randomly selected using the procedures outlined in Study 1. From the initial sample that consented to participate ($N = 115$), young people who rated the physical domain as low in ego-relevance were excluded from the study ($n = 5$). A stratified random sample was drawn from the remaining participants ($n = 110$) so that there were equal numbers of males and females ($n = 20$) for each age and gender group. Three 10-year-old participants were absent from the testing days.

All participants indicated that they played a range of sports. The most frequent male team sports were Australian rules football, soccer, basketball, and cricket. For females, the most common sports were netball, basketball, and softball. The most common individual sports were athletics and tennis.

Measures and Instruments

Sham Physical Skill Test

All participants completed two tests of the sham physical skill test as used in experiment one.

Feedback Contingencies

The operational definition of non-contingent failure feedback contingency established in Study 1 was used for this study. The non-contingent success condition was excluded based on the results of experiment one. The non-evaluative condition remained the same as that for experiment one.

Inventories

All measures used in experiment one were used in this study.

Procedure

This study followed the procedures described in experiment one, except that due to the relatively young age of some of the participants and the varying comprehension levels, individual items were read to participants when required during the responses to the questionnaires (Cardinal, Martin, & Sachs, 1996; Cardinal & Sachs, 1992; Ryska et al., 1999).

Design and Analysis

The validation to assess the effectiveness of the evaluative manipulation (ANCOVA) followed the same process discussed in experiment one. Tests of the linear model analysis assumptions for ANCOVA were all within the critical thresholds (Hair et al., 1995), thus no transformation of data was undertaken. A two-way between-groups analysis of variance (ANOVA) tested the main effects of age groups, feedback contingencies, and their interaction. Specifically, the factorial design assessed differences in self-handicapping because of the interaction between age groups and evaluative conditions. The two independent variables were age groups 2(10 & 13) and evaluative conditions 2(*non-contingent failure* and *non-evaluative control*). Age was taken as whole age at the time of sample selection. Self-reported performance disruption scores served as the dependent variable. Test of the assumptions for ANOVA were carried out, with all results within the critical threshold scores (Hair et al.), thus, no transformation of the dependent variable occurred. A priori power was assessed on the results of Study 1, thus for a medium effect size ($f = .25$), each group needed at least 40 to 42 participants for a total number of 80 to achieve adequate power levels.

Results

Participants cited an array of self-handicaps, with a small number not reporting any ($n=28$). As in the previous experiment, participants cited multiple handicaps with the most frequent including; sports injuries, too much homework, tiredness,, family problems, and a lack of motivation. Both age groups were able to cite

handicaps, with 10 year olds most frequently cited handicap being tiredness and 13 year olds, lacking motivation.

ANCOVA results of the test experimental validation showed that the experimental manipulation of perceptions of control had the desired effect with a significant main effect for feedback, $F(1, 77) = 83.31, p < .0001$, with participants in the non-contingent failure condition reporting less control ($M = 2.18, SD = .54$) than participants in the non-evaluative condition ($M = 3.84, SD = .23$).

Age and Differences in Self-handicapping

The main effect of feedback contingency group yielded an F ratio of ($F(1, 77) = 83.31, p < .05, \eta^2 = .53$), indicating that participants in the non-contingent failure condition reported significantly higher disruption scores ($M = 17.55, SD = 16.24$) than participants in the non-evaluative condition ($M = 5.12, SD, 6.30$). The F ratio for the main effect of age was ($F(1, 77) = .21, p > .05, \eta^2 = .74$). The F ratio for the interaction yielded a significant F ratio ($F(2, 77) = 73.96, p < .05, \eta^2 = .50$) indicating that the mean performance disruption scores varied feedback condition and age group. Post hoc comparisons (Scheffé) with adjustments for multiple comparisons (Bonferroni) revealed that for the 10-year-old age group, there was no-significant ($p > .05$) difference between the non-contingent failure condition ($M = 1.88, SD 1.49$) and the non-evaluative condition ($M = 1.22, SD = .91$). Nonetheless, for the 13-year-olds age group, those in the non-contingent failure condition reported significantly higher levels of performance disruption ($M = 31.65, SD = 8.39$) than their counterparts in the non-evaluative condition ($M = 8.85, SD = 6.93$). The results are consistent with

the hypotheses that the reporting of performance disruption would vary because of the interaction between feedback contingency condition and age group.

Discussion

The aim of the present experiments was to examine differences in young peoples' use of self-handicapping when faced with an evaluative threat, in essence, a test of the two formulations for self-handicapping (Jones & Berglas, 1978; Snyder & Smith, 1982). The results indicated that young people, regardless of gender, when faced with an evaluative threat caused by non-contingent failure on a first test of physical ability used claimed impediments as a performance disruption before a subsequent test. Moreover, this self-handicapping tendency was not evident when evaluative threat was caused by non-contingent success.

The finding that non-contingent success was not a pathway to performance uncertainty is at odds with previous literature (Berglas & Jones, 1978; Kolditz & Arkin, 1982; Tucker, Vuchinich, & Sobell, 1981). There are several possible explanations for the rejection of the first research hypothesis and its associated gender hypothesis.

It is possible that the experimental manipulation for the non-contingent success condition (75th percentile) was insufficient and subsequently participants in that condition did not experience a sufficient threat to warrant the use of self-handicapping. Previous studies protocols (Berglas & Jones, 1978; Kolditz & Arkin, 1982; Tucker et al., 1981) have operationalised success at the extreme end of the performance spectrum. In experiment one, the deception was less dramatic in several ways; the percentiles were based on real data rather than illusionary, and the percentiles indicated a lower level of success. The effect sizes between

feedback contingency groups on the pre experimental manipulation scores for perception of control score indicate that there was a larger effect between the non-contingent failure group and the non-evaluative group than between the non-contingent success group and the non-evaluative group. Thus, participants in the non-contingent success condition experienced less threat compared to the non-contingent failure group. Perhaps the level of threat was insufficient to cause participants in the non-contingent success group to self-handicap.

It is possible that evaluative threat in the experiment one posed a confounding effect on participants in the non-contingent success group. Although participants reported less control over the second test, the first test success outcome may have undermined their motivation to self-handicap. Self-handicapping is a strategy designed to cloud the link between ability and flawed performance. The first test success, although unexplained and posing some evaluative threat, along with the immediate parallel test may have provided a situation that did not warrant a self-handicapping response. For example, after the performance feedback manipulation, participants may have perceived the situation as already ambiguous. Participants in the non-contingent success group may have perceived that after the parallel test there were two possible outcomes: either they would have a 50 per cent success rate (one win and one loss) or at best, a total success rate (two unexplained successes). In the first instance, any evaluation of ability would have been ambiguous because of the one win, one loss outcome. Under such a circumstance, the need to self-handicap by withdrawing effort might have been viewed as an unnecessary strategy. In the second instance, total success might have been unexplained but the outcome was

still successful. The one-off outcome may not have been sufficient to threaten self-esteem.

Jones and Berglas (1978) in their initial proposal argued that a positive yet tenuous self-concept arose from a history of non-contingent success. One-off experiences of success, such as that in the present study, may not create the positive yet tenuous self-concept described by Jones and Berglas. Moreover, the one-off success experience may not be sufficient to shake one's belief in one's ability. Long experiences of unexplained success might give rise to the type of self-handicapping whereby young people manipulate their behaviour to self-handicap, for example, withdrawing from sport, procrastination, and excuse-making. Regardless of the outcome of experiment one, coaches and teachers should not disregard the effect of non-contingent success feedback on young people. The result from the manipulation indicates that non-contingent success causes young people to doubt their ability to control the outcome of a test evaluative of ability. What the present results do not show is the effect of a continual history of non-contingent success. This is a possible area of future research, but given the ethical considerations, one that will possibly remain unanswered.

The second finding for experiment one is that unexplained failure is an antecedent pathway to performance uncertainty and hence an episode of self-handicapping. This finding is in line with previous literature (Smith et al., 1982; Smith et al., 1983; Snyder et al., 1985). This is the first evidence that young people will self-handicap because of previous failure on an evaluative test of physical ability.

Two subsequent findings add to the understanding of how young people use self-handicaps. First, it would appear that both males and females are willing to use claimed self-handicaps when faced with performance uncertainty. This is in line with previous descriptive research in the physical domain (i.e., Coudeville et al. 2008). Second, the finding in experiment two that self-handicapping is a strategy that is restricted to children older than 10. More specifically, young people (i.e., 10 years old) do cite self-handicaps but not in a sophisticated manner as older children. Older children are able to articulate the effect of their self-avowals in terms of the amount of performance disruption that will have on upcoming test efforts.

The present findings have consequences for coaches and teachers of young people. Often in attempting to be successful at achievement tasks, young people experience failure. The experience of failure is not a potential problem: indeed, protecting young people from the experience of failure can itself create problems. Ansbacher and Ansbacher (1967) interpreted Adler's notion of self-defensive strategies as being positive ones, at least in the short term. The use of self-avowals as a means of providing psychological distance between the flawed performance and the individual's self-image can be seen in a positive light because the self-handicap possibly allows continual engagement in achievement tasks, despite the presence of anxiety about performance outcomes. The self-handicap is a cognitive strategy that allows individuals to preserve self-esteem in the face of failure, and hence allows them repeated attempts to achieve success. What is not known is whether individuals would forgo the use of self-handicaps when feedback becomes contingent. Information about how to change a failure or why a failure occurred might remove any anxiety about performance and

therefore remove the need to self-handicap. This is a potential area for future research.

The consequence of the results for non-contingent failure for coaches and teachers is that their students or athletes will use self-handicaps when they experience failure because of the aversive nature of failure. If coaches and teachers are aware of the nexus between failure and self-handicapping, then they can change either the evaluative circumstances of the environment or ensure that young people are made aware of the reasons for failure and the strategies that can alter failure to success. Moreover, teachers and coaches should also be more aware that they could be a source of an emphasis on achievement as a criterion for self-worth because they emphasize achievement as a criterion for self-worth. Employing teaching strategies that encourage multiple bases of personal evaluation is a strategy that can be employed to contain the effects of failure in terms of humiliation, disappointment, and anxiety.

Finally, the results from tests of both hypotheses indicate that the antecedent condition of non-contingent success did not cause differences in self-handicapping. It would appear that unexplained failure has more immediate consequences than does unexplained success. The obvious question is why. One possible explanation is the saliency of effort withdrawal as a self-handicapping strategy for the physical domain. Effort withdrawal may place young people at cross-purposes. Effort is valued in sport contexts and the withdrawal of effort could sabotage performance in a number of ways, for example, withdrawing effort during training may result in exclusion from the team. Self-handicaps are a means of obscuring the link between ability and flawed performance, but they should not interfere with performance (Self, 1990). Young people could have

perceived the strategy of not practicing as increasing the likelihood of flawed performance. Future research should investigate the saliency of other types of behaviours as self-handicaps for the physical domain.

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