

# When the chips are down: Effects of attributional feedback on self-efficacy and task performance following initial and repeated failure

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In two experiments, we manipulated the controllability and stability of causes of failure and explored the impact of these factors on self-efficacy and performance. In Experiment 1, participants were provided with false negative feedback following performance on a blindfolded dart throwing task. Consistent with theory and recent research, an induced belief that failure was beyond control and unlikely to change led to lower self-efficacy and worse performance. A second experiment demonstrated that following an induced belief that failure was beyond control and unlikely to change, only new perceptions that a repeated failure was within one's control and likely to change resulted in higher self-efficacy and improved performance. All effects were mediated by self-efficacy.

**Key words:** Controllability, Stability, Moderation, Mediation

## INTRODUCTION

Attributions are explanations about why particular behaviours have occurred, and explanations enhance people's ability to predict and control events in the future. Although it has been suggested (e.g., Bandura, 1997) that self-efficacy may mediate the effects of attributions upon behaviour, such as performance, relatively few researchers have examined such proposals. Those that have typically reported mediation of main effects or additive effects of attribution dimensions upon outcomes. The present experiments extend the literature through exploring the interactive effects of controllability (degree to which the causes of outcomes are seen to be under one's direct control) and stability (degree to which the causes of outcomes are unlikely to change) attributions for failure upon self-efficacy and performance following (a) a single induced failure (replication of Coffee, Rees, & Haslam, 2009, with the addition of exploring mediating effects), and (b) a repeated failure after initial feedback that causes of failure were uncontrollable and unlikely to change. Extending the literature further, in both experiments we explore the mediation of interactive effects.

## EXPERIMENT 1

### *Method*

Participants were a convenience sample of 80 athletes (47 male, 33 female; mean age 20.03, *SD* 1.03 years). The experiment had a two-factor design, with two levels to each factor (controllability: high, low; stability: high, low). Failure following the first performance was induced by providing false negative feedback together with using a manipulated results sheet.

### *Results & Discussion*

ANCOVAs revealed that, after controlling for the effects of pre-manipulation variables, there were significant main effects for controllability and stability on post-manipulation self-efficacy and performance ( $F_{s_{1,75}} \geq 4.50$ ,  $ps < .05$ ,  $\eta^2_s \geq .01$ ). However, effects were conditioned by interactions between controllability and stability upon self-efficacy and, as Figure 1 demonstrates, performance ( $F_{s_{1,75}} \geq 5.49$ ,  $ps < .05$ ,  $\eta^2_s = .01$ ). Follow-up analyses revealed that an induced belief that failure was beyond control and unlikely to change led to lower self-efficacy and worse performance. Mediation analyses demonstrated that self-efficacy fully mediated the main and interactive effects of attributions upon performance ( $z_s \geq 1.97$ ,  $ps < .05$ ,  $rs \geq .22$ ).

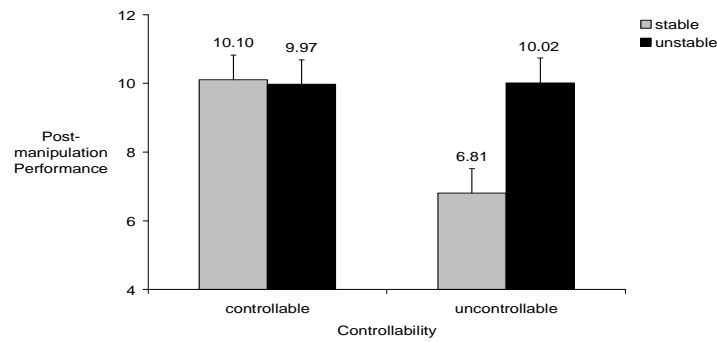


Figure 1. The effects of controllability and stability on task performance

## EXPERIMENT 2

### Method

Participants were a convenience sample of 80 athletes (45 male, 35 female; mean age 21.96, *SD* 2.10 years), none of whom had participated in Experiment 1. The experiment followed the same procedure as Experiment 1 with the addition of an initial phase involving a manipulation of failure to uncontrollable and stable causes.

### Results & Discussion

There were significant main effects for controllability and stability on trial 3 self-efficacy and performance ( $F_{s_{1,75}} \geq 6.51$ ,  $ps < .05$ ,  $\eta^2_s = .01$ ). However, effects were conditioned by interactions between controllability and stability upon self-efficacy and, as Figure 2 demonstrates, performance ( $F_{s_{1,75}} \geq 4.53$ ,  $ps < .05$ ,  $\eta^2_s \geq .004$ ). Follow-up analyses revealed that self-efficacy and performance on a third trial only improved for those participants who were led to believe new information that causes of failure were both inside their control and likely to change. Consistent with the results of the first experiment, we found that all effects on performance were mediated by self-efficacy ( $zs \geq 2.34$ ,  $ps < .05$ ,  $rs \geq .26$ ).

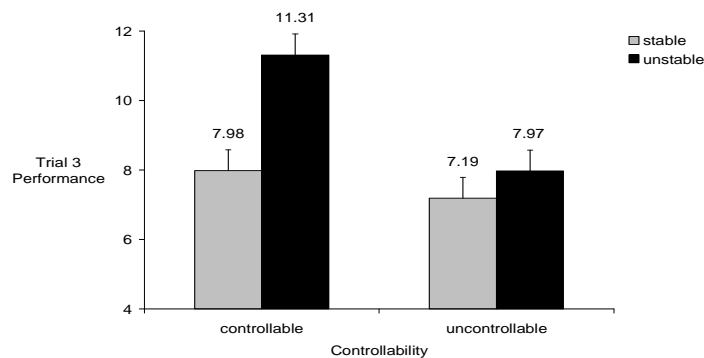


Figure 2. The effects of controllability and stability on task performance

## CONCLUSION

Collectively, these findings suggest that in novel circumstances individuals believe in the best for themselves unless possibilities to self-enhance are explicitly precluded and only reinvest efforts when opportunities for self-enhancement become clearly admissible.

## REFERENCES

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