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The effect of shifting between internal and external foci of attention on throwing accuracy

Lowen, J.

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The Plymouth Student Scientist

University of Plymouth

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Appendix A

University of Plymouth

Faculty of Science and Technology

Research Project Information Sheet

Name of Principle investigator

Jeremy Lowen

Project Tutor

Patric Bach

Title

An experiment investigating the accuracy of throwing in students

Aim of research

The research aims to test the effect of an external or internal focus of attention on throwing accuracy.

Procedure

After signing the consent form you will be asked to read a short extract. You will then be asked to throw the tennis ball towards the centre of the target with your non – dominant hand i.e. if you are right handed, throw with your left. There will be 6 sets of 15 throws. Between each set you will be asked to read another extract.

Risks

There are no known risks with this experimental procedure and similar target throwing experiments have been conducted with no harmful effects being reported.

Benefits of research

Implications of this research extend to sports performance and other tasks which involve basic motor skills such as throwing.

You will be awarded 1 credit for this study, which should last no longer than 30 minutes.

Right to withdraw

You can withdraw your data at any time and any of your data collected may be removed if you wish.

Contact email

Jeremy Lowen - xxxxxxxxxxxx

Patric Bach – xxxxxxxxxxxx

Appendix B

University of Plymouth

Faculty of Science and Technology

Human Ethics Committee Consent Form

Consent to participate in psychology research project

Name of experimenter – Jeremy Lowen

Project Leader – Patric Bach

Brief statement of proposed work

This experiment will investigate the accuracy of throwing among students. You will be asked to throw a tennis ball towards a target and your success rate will be recorded.

I have read the information sheet.

The aims of the experiment have been explained to me.

I understand that I have the right to withdraw at any time and that any data I provide may be removed if I wish.

I am aware that my data will remain totally anonymous, unless otherwise stated.

Under these conditions, I agree to participate in the experiment.

Sign

Student ID

Date

Appendix C

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Debrief Sheet

Thank you for participating in this experiment.

Experimental design

We are investigating the effect of either an internal (movement of the body) or external (movement of the ball) focus of attention on throwing accuracy. The description sheet you read before each set of throws was designed to change your focus of attention. The accuracy of your throws was recorded and will be statistically examined against the focus of attention condition you were in at the time.

Previous research

Gabriele Wulf has conducted a lot of research into the field of focus of attention. In her review of 10 years of research in 2007, she explained how an external focus of attention led participants to perform better in many motor skills including, dart throwing, jumping, basketball shooting, balancing, American football, soccer, volleyball and golf. The implications of which are important to consider in sports coaching, where the emphasis tends to be on technique, an internal focus of attention. Further implications could be considered in many other motor skills, such as playing musical instruments. It may therefore be beneficial to reduce the emphasis on technique and instead focus on the desired outcome.

Withdrawal

You have the right to withdraw your data from the experiment at any time.

Contact

If you wish to contact the experimenter at any time, wish to ask further questions or want some more information about the research field, feel free to email.

Experimenter – Jeremy Lowen. xxxxxxxxxxxxxxxxxxxxxxx

Project leader – Patric Bach xxxxxxxxxxxxxxxxxxxxxxx

Appendix D

Internal Focus throwing description

Using your non-dominant hand, throw the tennis ball as accurately as you can towards the centre of the target. You must be standing while you throw and all throws must be over arm. You will have 15 throwing attempts in this set.

Visually focus on the target whilst mentally focusing on the movement of your arm. When you're off target think about how you can correct the mistake by changing the motion of your arm. Each time you throw, focus on your arm and think about how you are moving.

Focus on the motion of your arm while being as accurate as possible.

Appendix E

External Focus throwing description

Using your non-dominant hand, throw the tennis ball as accurately as you can towards the centre of the target. You must be standing while you throw and all throws must be over arm. You will have 15 throwing attempts in this set.

Visually focus on the target whilst mentally focusing on the flight of the ball. When you're off target think about how you can correct the mistake by changing the flight of the ball. Each time you throw, focus on the ball and think about how it flies.

Focus on the flight of the ball while being as accurate as possible.