

### Introduction

The Theory of Planned Behaviour (TPB) describes how the performance of a behaviour is a result of intention, and states that there are three factors which contribute to intention: *attitude*, *subjective norm (SN)*, and *perceived behavioural control (PBC)*.

Attitudes  
Subjective Norms  
Perceived Behavioural Control

Intentions

Behaviour

However, research has found that variation in intentions only explains an average of ~25% of the variation in behaviour (Sheppard, Hartwick & Warshaw, 1988; Webb & Sheeran, 2006). This discrepancy between intentions and behaviour is known as the intention-behaviour gap (I-B gap).

Exercise Intentions

Exercise Behaviour

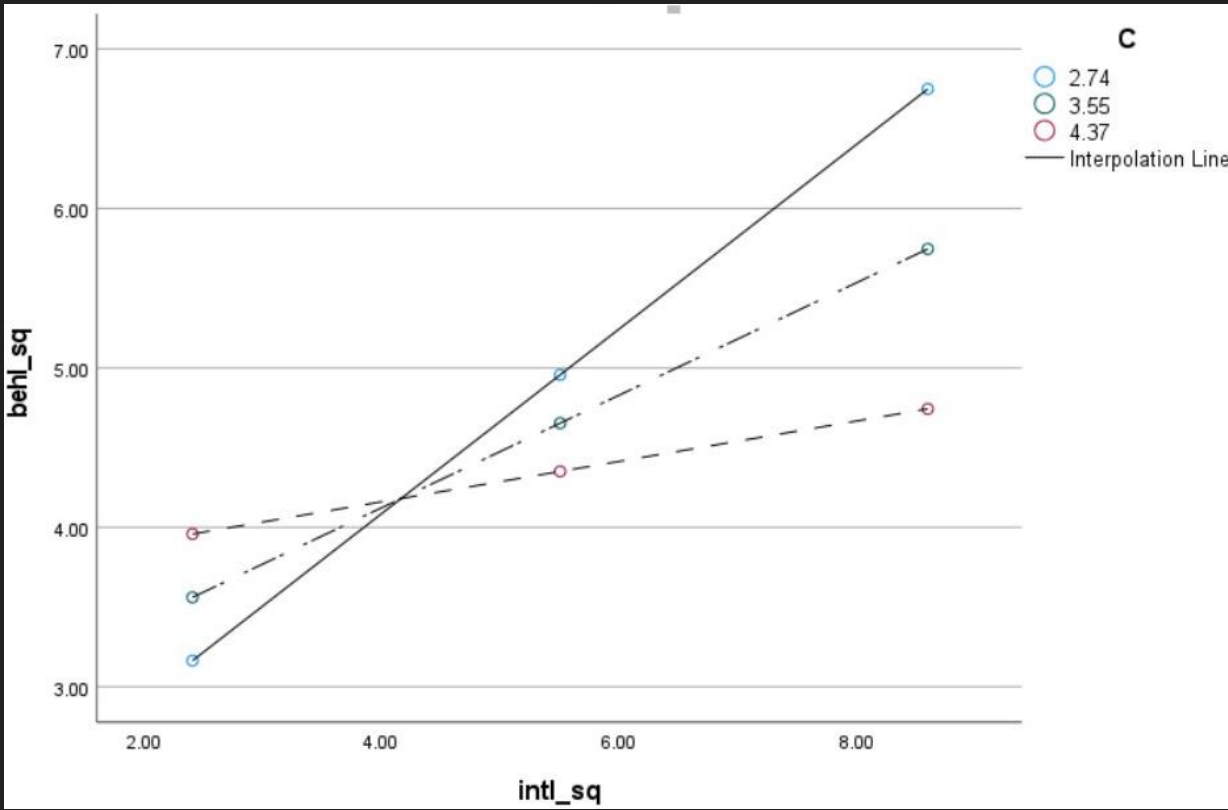
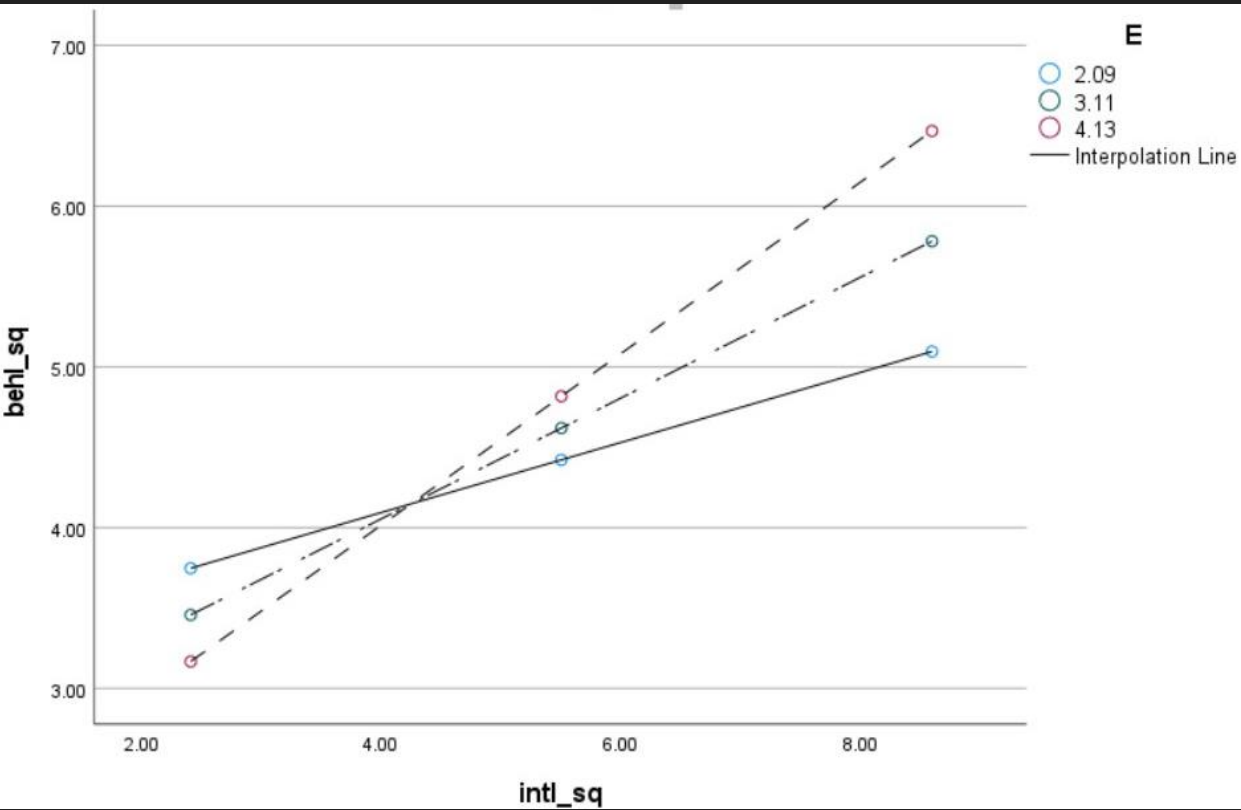
Personality?

Personality could be a vital aspect the I-B gap, as it is possible that certain traits could influence how the individual copes with problems in the pursuit of their goal. The dominant approach to studying personality traits is the Five Factor model of personality (Goldberg, 1990) which consists of five broad traits; *Extraversion*, *Agreeableness*, *Conscientiousness*, *Neuroticism*, and *Openness*. Research into the personality facets that may moderate the I-B gap is scarce, with very few replicated results.

### Results

A multiple regression analysis revealed that TPB variables explained 14.5% of the variance in intention, but attitudes were the only significant (independent) predictor of intention. There was a moderate, significant correlation between intentions and behaviour ( $r = .420$ ,  $p < 0.01$ ), intentions explained 17.6% of the variation in behaviour, so the intention-behaviour gap was 82.4%.

Moderation analyses revealed that light exercise was moderated by extraversion (left) and conscientiousness (right), such that the intention-behaviour gap was smaller at high extraversion and larger at high conscientiousness. A moderation analysis of total exercise revealed that personality had no moderating effect overall. The conclusion is that the total intention-behaviour gap for exercise was not significantly moderated by any personality traits.



#### Summary

Personality Trait	I-B Gap			
	Light Exercise	Moderate Exercise	Strenuous Exercise	Total Exercise
Intellect	No Effect	No Effect	No Effect	No Effect
Extraversion	Reduced I-B Gap	No Effect	No Effect	No Effect
Agreeableness	No Effect	No Effect	No Effect	No Effect
Conscientiousness	Increased I-B Gap	No Effect	No Effect	No Effect
Neuroticism	No Effect	No Effect	No Effect	No Effect

### Method

#### Participants

150 undergraduate psychology students from The University of Sheffield were recruited through the Online Research Participation Scheme. Participants had to be aged between 18 and 24 to take part.

#### Design and Procedure

This study used a correlational design with two waves of data collection one week apart. Participants completed measures of intentions and personality using Qualtrics. Once participants had completed this section, they were asked to provide an email address as a means of receiving the follow-up survey. The follow-up survey was sent to the participants after one week to measure their exercise behaviour.

#### Materials


Items to assess the TPB were developed in line with RAA guidelines (Conner & Sparks, 2015) and similar to use in previous studies (e.g., Jones & Norman, 2022). Two items were used to measure each construct.

To measure personality traits, a personality questionnaire was used. This was a 20-item measure based on the Five Factor Model (Goldberg, 1999), called the Mini-IPIP (Donnellan et al., 2006) which asked participants to rate statements on a scale of 1-5 based on how accurately they reflect their personality. There were 4 items to measure each of the 5 constructs.

In the second wave of data collection, the Godin Leisure-Time Exercise questionnaire (Godin, 2011) was used to ask participants about their exercise behaviour in the elapsed week.


### Strengths

- The study used a questionnaire design which means data collection was easy, fast, and cheap. This makes the research easily replicable.
- The use of quantitative data in this study means subjectivity was maximised with low chance of researcher bias.
- By using a 20 question version of the Big 5 Personality Inventory, the length of the questionnaire was minimised. This ensured that participants didn't get bored or restless when completing the questionnaire.



### Limitations

- Data collection occurred partly during a holiday and partly during term, which could have disrupted participants' exercise habits and intentions, potentially overestimating the I-B gap.
- The questionnaire may have been confusing for participants, this is evident because many did not respond in the correct way. The way the questionnaire measured different exercise types was also vague and subjective.
- After controlling for anomalies in the data, many analyses included a sample of just 81 participants.
- A population that includes only students is not representative of the general population, students are considered to be higher in certain personality traits such as conscientiousness which could confound potential effects.



### Reflection

When I started this research project, I was interested to see how personality affected exercise behaviour. I found that the intention-behaviour gap was a particularly interesting aspect of behaviour as it demonstrates how we often do not behave in the way we intended. I decided I wanted to combine this concept with personality and exercise which is how I produced my research question "Does personality moderate the intention-behaviour gap in exercise?". I found that the previous research around this question was scarce and different studies often produced contradictory results. I hoped that my research may solidify some of these findings in the context of university students.

Overall, the data collection went very smoothly and I was able to collect data for up to 150 participants. Unfortunately, the staggered structure between the first and second questionnaires meant that many participants did not complete the second part. The results of this research largely suggest no moderating effects of personality, and the few moderating effects that were found are more well explained by methodological limitations. If I were to conduct this research again, I would address some of the limitations listed above. I would ensure that data collection occurred only during term time, and I would also use a different measure of exercise to maximise objectivity of measurements.

Throughout this research project, I have learned a range of skills that I hope to utilise further. I have become more confident in data collection techniques and in the use of SPSS. I have also come to further appreciate the effort that goes into carrying out research and the wide range of limitations that researchers face along the way.

Exercise Intentions  
TPB  
Personality

1 Week

Exercise Behaviour