

## **A real world study to look at the performance, behaviour and career aspirations of students in secondary education - Halewood College Study – 2008**

### ***Background***

Knowsley Borough Council Children's Services Directorate has been participating in the Pathfinder projects set up to look at the behaviour of young people in the UK. One of those pathfinder projects has as its core theme "Risk & Resilience".

Because the concept of Mental Toughness is closely associated with Resilience, the Mental Toughness Questionnaire, MTQ48, and the Mental Toughness model were used to test and investigate a number of hypotheses.

Resilience can be considered a component of Mental Toughness.

### ***The Study and the Hypotheses***

The hypothesis to be tested was simply that Mental Toughness is related to Performance, Behaviour and Well-being. This embraced considerations of Career Aspirations and perceived Bullying.

A study was set up with the co-operation of a secondary college (Halewood College in Knowsley). This is based in an area which experiences a degree of social deprivation.

The study covered the entire year 10 group (age 16 years), some 240 pupils. All pupils participated – no self selection was permitted.

The following data was collected from each pupil:

- Mental Toughness – through MTQ48
- Careers Aspirations – short structured questionnaire
- Perceptions of Bullying – short structured questionnaire

The following data was provided by the College/year tutors about each pupil.

- Year tutors assessment of students Mental Toughness – structured assessment
- Behaviour records – school behaviour records
- Attendance – attendance records
- Cognitive Ability measures – CATS for verbal, non-verbal and quantitative abilities

The data was analysed by researchers at the University of Hull under the expert guidance of Dr Peter Clough, Head of Psychology who is also the developer of the Mental Toughness concept and measure.

### **The Results**

What emerged was a fascinating set of results. The study showed the following:

#### **ASSESSMENT OF MENTAL TOUGHNESS AND ITS LINK TO BEHAVIOUR**

- The student's assessment (through MTQ48) was broadly in line with the tutor's assessment of their Mental Toughness – but there were important differences.
- Differences between teacher and pupil ratings of mental toughness are related to behaviour. The students assessment (i.e. MTQ48) was significantly better at predicting negative behaviour than the year tutors assessment
- MTQ48 was able to explain 13% and 25% of variance in negative behaviour for males and females respectively. Year tutors assessment was able to explain 12% of the variance in female behaviour and none of the male behaviour.
- This simply means that the MTQ48 questionnaire emerged as a good predictor of negative behaviour and was better at predicting negative behaviour than the teacher's assessment of the pupils.
- This is not a criticism of teachers/tutors. The same type of results are achieved in the workplace where managers consistently make better selection and development decisions about their staff if they use psychometrics than if they use only their judgement.
- There was a significant difference between Mental Toughness scores for females than for males. Generally female scores were lower. See Fig 2
- This was particularly interesting since this is the first study on any group which has shown a significant difference between male and female mental toughness. Co-incidentally a separate study was being carried out with a large employer in the same borough on people of working age. This showed the usual pattern - no difference between male and female scores.
- This is being examined more closely to identify why these results should emerge in a fairly large sample. One hypothesis is that there is a cultural element in the college or in the local area which treated young men and young women differently. This is possibly indicated with the next observation.
- Analysis of the MTQ48 results and the tutor's assessments of their mental toughness and the behaviour data showed that tutors viewed males and females differently. See Fig 3 and Fig 7

- Where MTQ48 indicated a high level of Mental Toughness, tutors were significantly more likely to identify negative behaviour amongst females than amongst males. It seems that challenging behaviour (a sign of Mental Toughness) is more likely to be regarded as negative behaviour in females than in males.
- Conversely, where MTQ48 indicated a low level of Mental Toughness, tutors were significantly more likely to identify negative behaviour amongst males than amongst females. It seems that quiet compliant behaviour is more likely to be regarded as negative behaviour in males than in females.

### **ASSESSMENT OF MENTAL TOUGHNESS AND ITS LINK TO ABILITY**

- Analysis of MTQ48 scores showed that in every case – verbal ability, non-verbal ability and quantitative ability – there was a direct – almost straight line correlation between Mental Toughness and ability.
- Analysis showed that the patterns were virtually the same for males and females with non-verbal and quantitative abilities. With verbal ability there were two straight lines, almost in parallel, showing that females consistently scored higher at each level of mental toughness. See Figs 4, 5 and 6
- This confirms results achieved elsewhere. Improving mental toughness can lead to better ability scores. It is thought that the more mentally tough a person is, the more likely they are to do well in a test (because they are more confident) and the more likely they are to absorb learning because they are more confident and feel more in control.

### **ASSESSMENT OF MENTAL TOUGHNESS AND ITS LINK TO CAREER ASPIRATIONS**

This was one of the core objectives of the study – to see if there is any explanation why people struggle to shake off a poor start in life or disadvantaged background.

If aspirations are low then achievement is also likely to be low.

- The study showed that the more mentally tough the student, the higher the aspirations. The most mentally tough aspired to professional careers, the next most mentally tough aspired to careers in drama and entertainment. Both these sectors are demanding. See Fig 8

The next category were attracted to blue collar work and finally white collar work (clerical etc) seemed to attract students with the lowest mental toughness scores.

This shows a clear link between mental toughness and career aspiration. Mental toughness could usefully be incorporated into career guidance activity.

## **ASSESSMENT OF MENTAL TOUGHNESS AND ITS LINK TO BULLYING (SELF PERCEPTION)**

- Analysis of Mental toughness scores and the tutor's assessment showed that there was a clear and strong relationship between the students belief they were being bullied in some way and their level of mental toughness.

This confirms the finding of a major study at Hull University which showed the same results in the workplace.

The likely explanation is that mentally tough people shrug off other people's behaviour or actions and don't feel bullied or threatened by it.

Mentally sensitive people on the other hand (mental sensitivity is the opposite of mental toughness) appear to respond negatively to any level of provocative or challenging behaviour from other people and will feel intimidated by it.

- MTQ48 scores and tutor scores are very similar suggesting that tutors are good at identifying bullying where it occurs – perhaps because the behaviours are obvious when they happen.

This shows a clear link between mental toughness and bullying. Developing mental toughness generally within a group could result in a reduction in reported bullying.

## **SUMMARY**

The results show that mental toughness is a valuable concept in understanding how young people perform and how they behave in education.

Moreover since mental toughness is a state and not a trait (and MTQ48 is therefore a state measure), we know that we can develop mental toughness with most people. Mental toughness could have a key role to play in developing people at all levels.

Fig 1 Mental Toughness scores (MTQ48) correlated with Teachers assessment of Mental Toughness

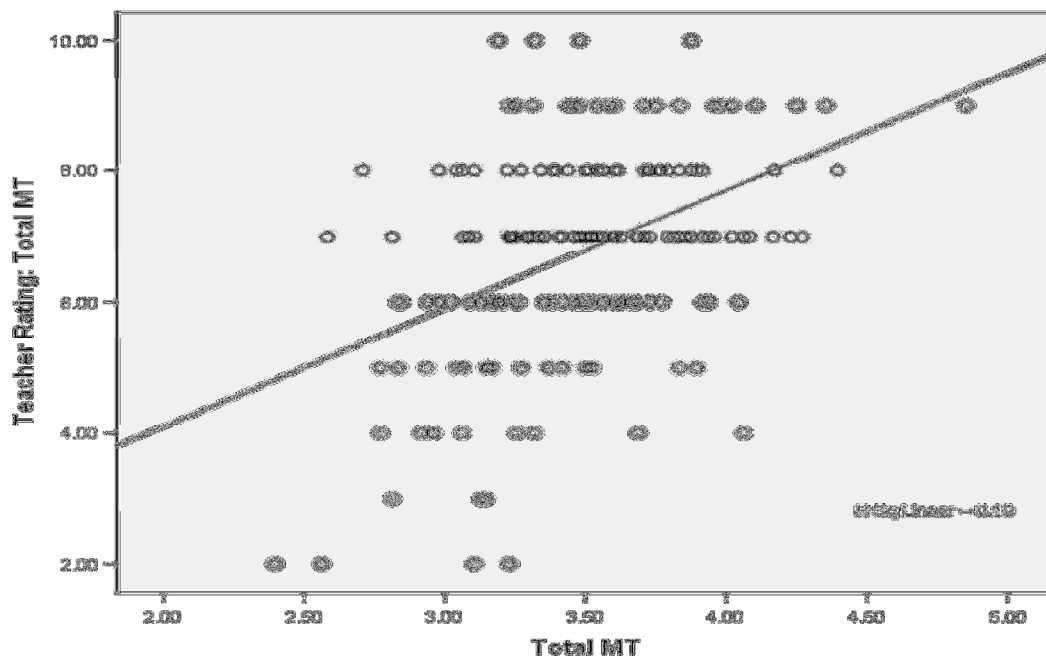


Fig 2 Average Mental Toughness scores for each scale and sub scale – males and females. Significant differences on all but two scales (Challenge and Life Control).

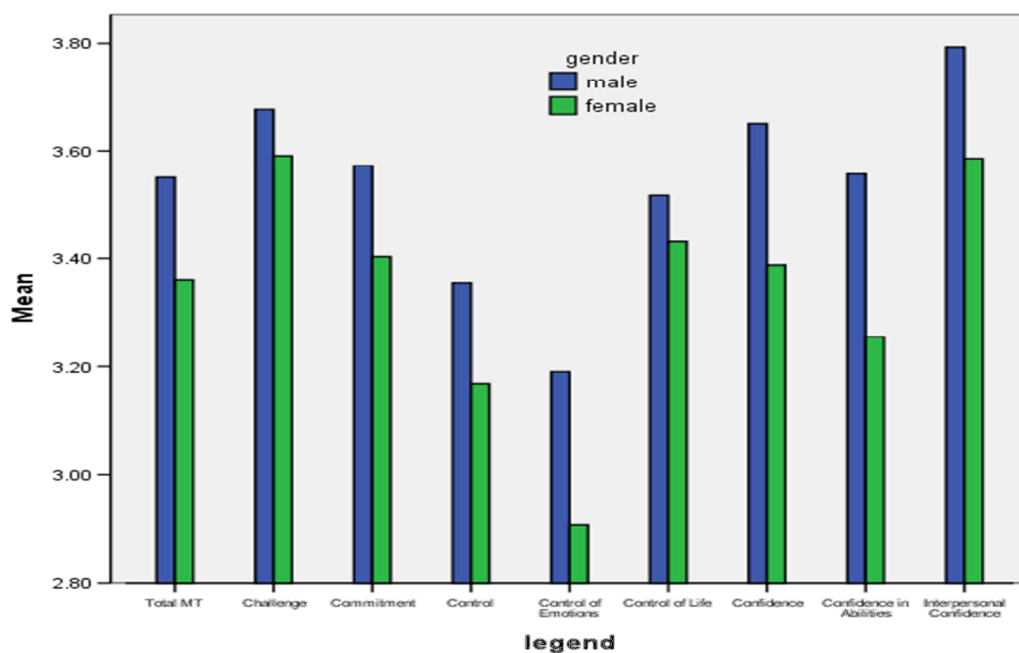


Fig 3 Mental Toughness scores (MTQ48) for males and females correlated with negative behaviour scores

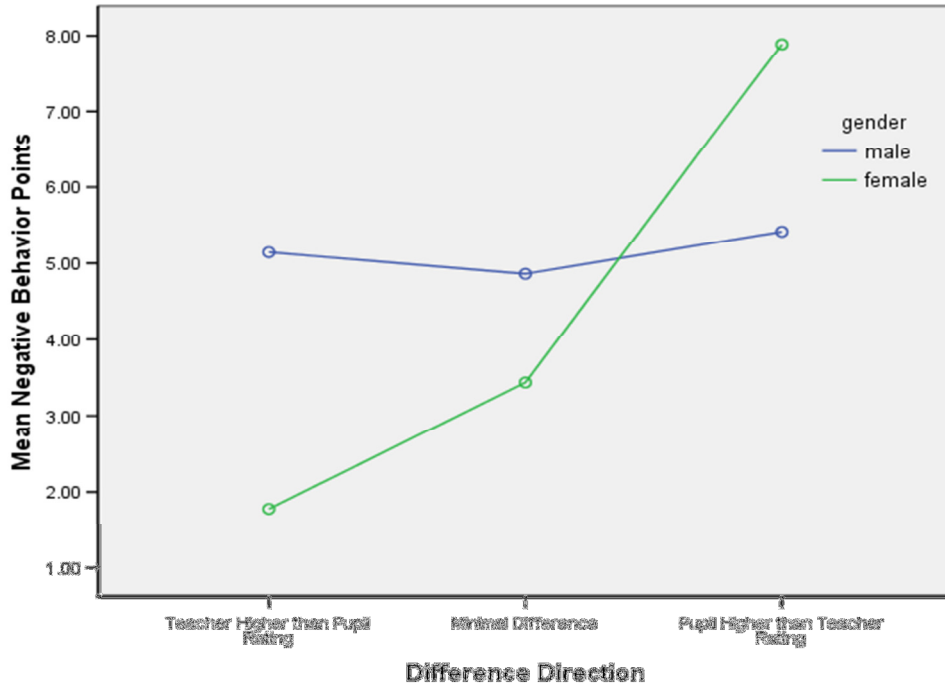


Fig 4 Mental Toughness scores (MTQ48) correlated with Non-verbal ability

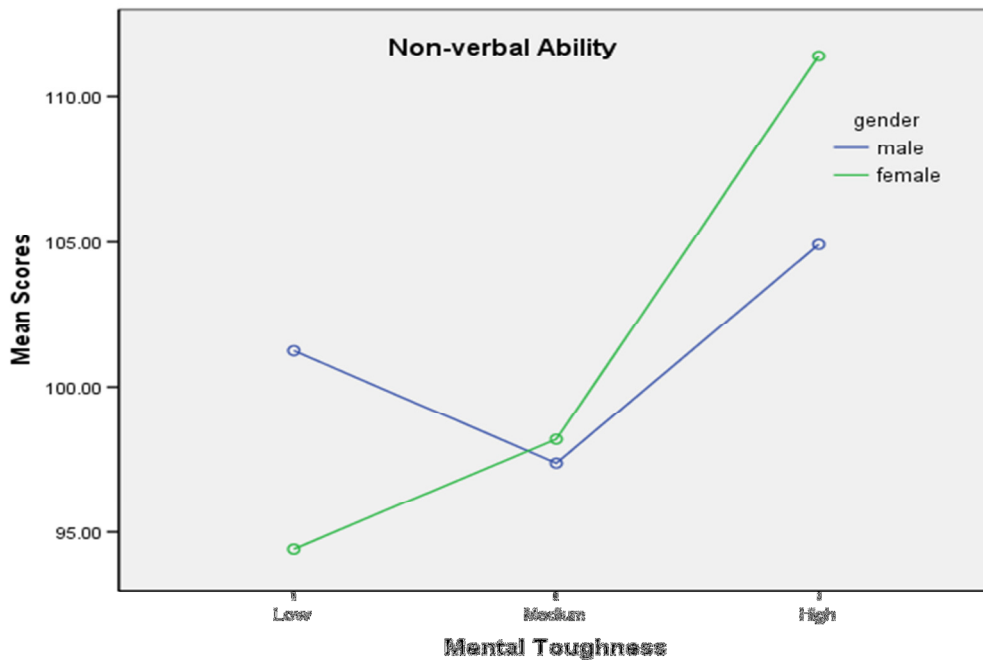


Fig 5 Mental Toughness Scores (MTQ48) correlated with Verbal Ability – note the parallel lines showing that female ability scores are higher than male ability scores.

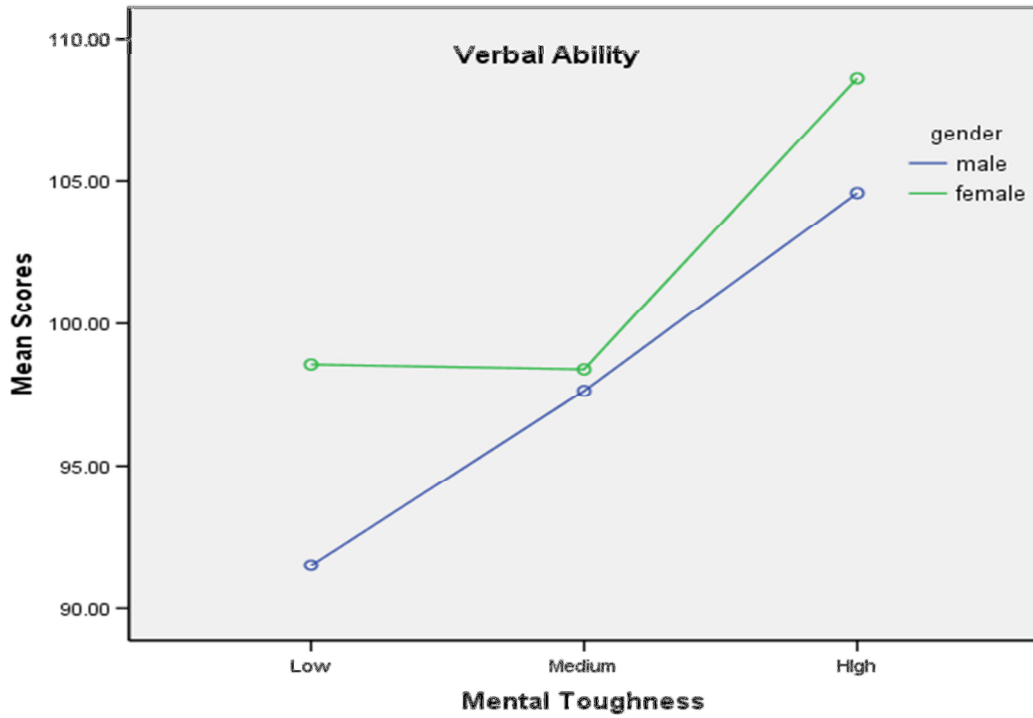


Fig 6 Mental Toughness Scores (MTQ48) correlated with Quantitative Ability

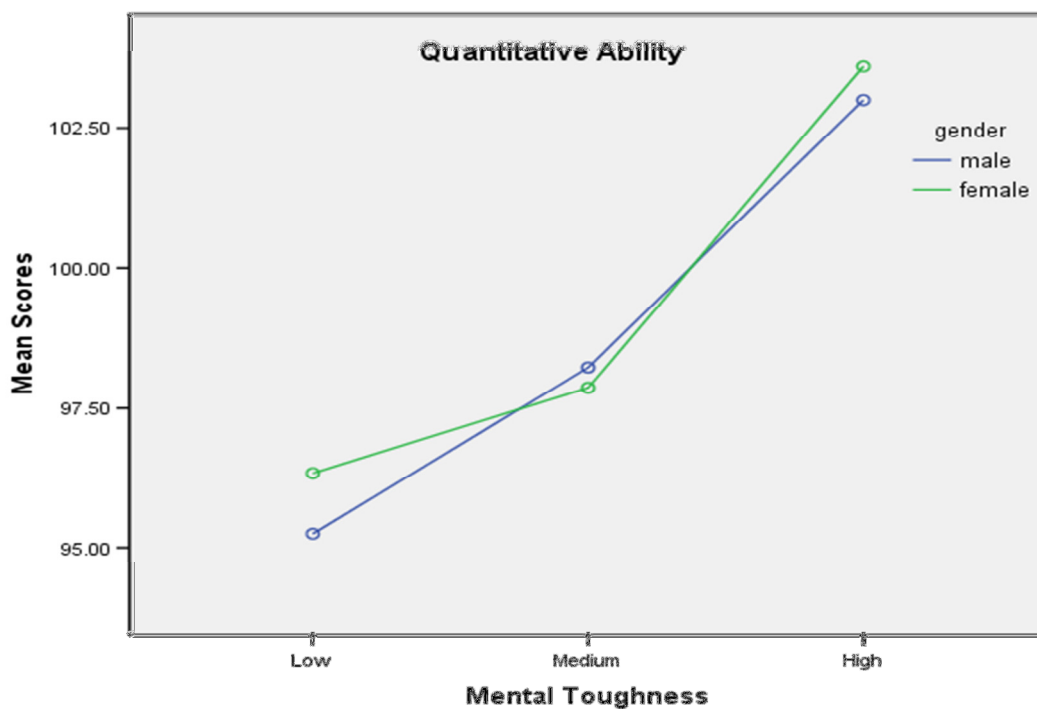


Fig 7 Teacher-Pupil ratings differences

- High MTQ mentally tough males were rated as more mentally tough than their female counterparts by their teacher.
- Low MTQ mentally tough males were rated as less mentally tough than their female counterparts by their teacher.

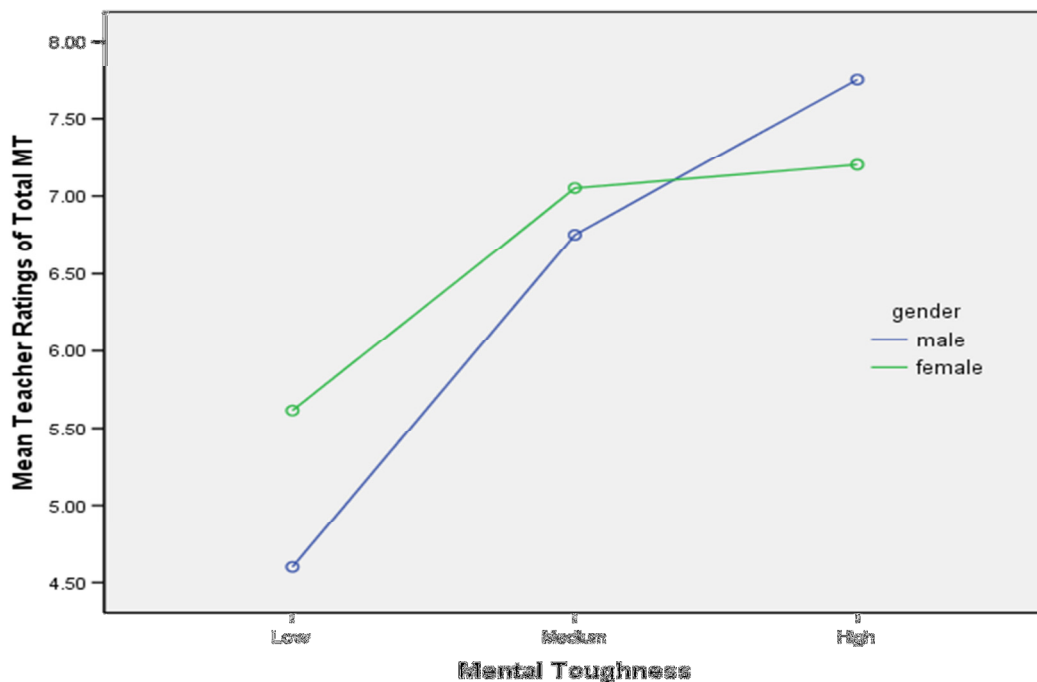


Fig 8 Mental Toughness scores (MTQ48) and Career Aspirations

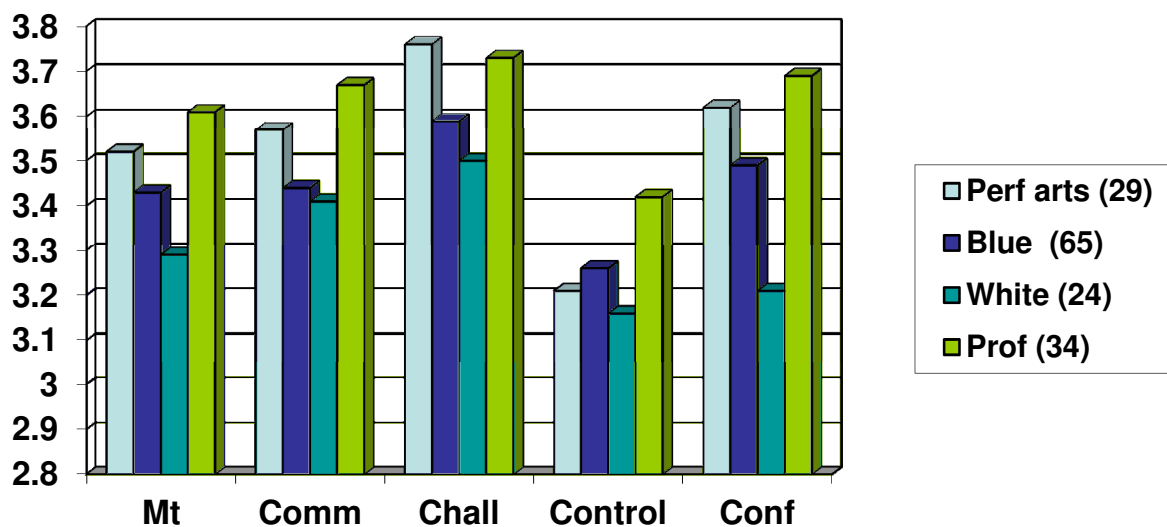




Fig 9 Mental Toughness scores (MTQ 48) and reported Bullying

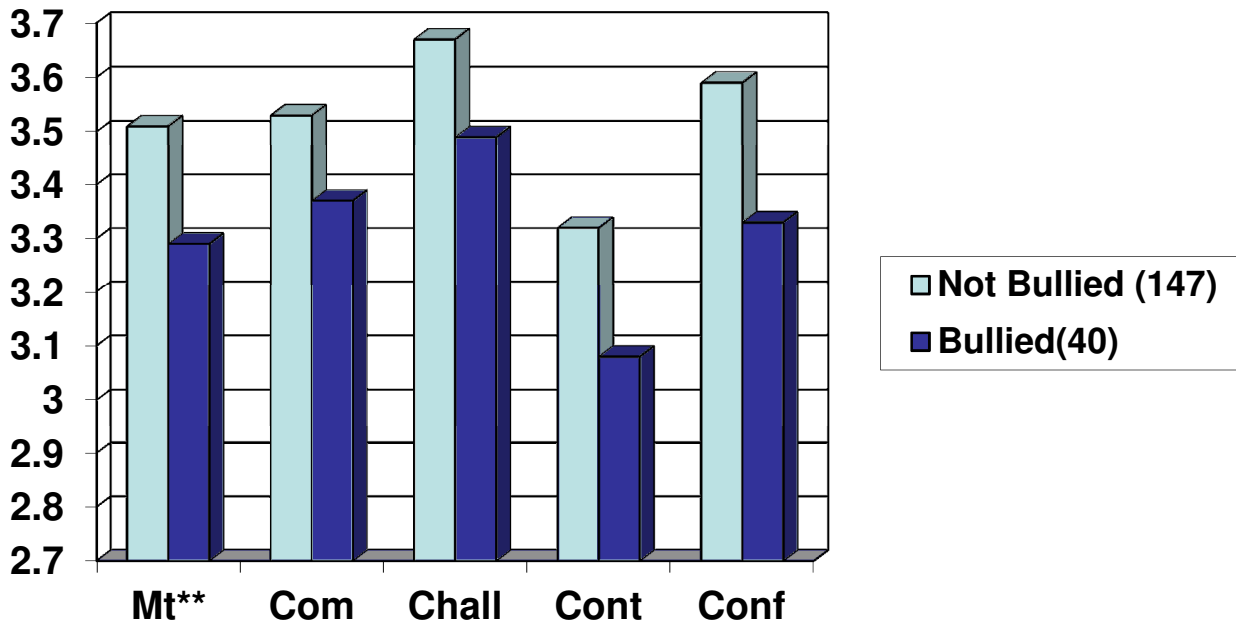


Fig 10 Teachers ratings of Mental Toughness and reported Bullying

