Test anxiety, GCSE performance and socio-demographic moderators

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Background

A well-established and robust finding in the literature is a small inverse relationship between test anxiety and various types of performance measures. Meta analyses have estimated this effect at -29, from grade 4 upwards, and -21 (Hembree, 1988 and Selipp, 1991, respectively) and a number of demographic, situational and task-related factors have been shown to moderate this relationship, that is, to influence the size and/or direction of this effect.

Despite a large international literature dating back to the mid 1950s, there has been very little research examining test anxiety in the UK until relatively recently (e.g. Keogh, Bond, & Flaxman, 2007; Spada, Nikcevic, Moneta & Ireson, 2006) and Putwain (2007) represents the only research conducted in the UK using samples of students in compulsory schooling for nearly 40 years. In short, there is very little known about the characteristics of test anxiety and performance within the school aged population and as Zeidner (1990) notes, due to variations in cultural and socialisation practices, schooling, societal expectations and so forth, the results of previous work should not be uncritically generalised to other national populations.

The twofold aim of this study was primarily empirical: 1. to establish the relationship between test anxiety and assessment performance in a sample of UK students at arguably their most critical stage of schooling; the General Certificate of Secondary Education (GCSE) and 2. to establish if this relationship is moderated by socio-demographic variables: gender, age, socio-economic background and ethnic background. In this study, age was established by year group.

Method

1348 students from six secondary schools in the final two years of their compulsory schooling (Years 10 and 11) completed the Test Anxiety Inventory (Spielberger, 1980) and a Student Profile Questionnaire (designed to gather socio-demographic data). Performance data in Year 10 was collected from the mean score of students’ modular GCSE examinations in Mathematics and Science, and in Year 11 from the mean GCSE grade. GCSE grades (A*–G), were converted to a numerical scale of 1-8 using the current convention for educational research in the UK. In this system an A* grade received a value of 8, grade A a value of 7 and so forth. In this system an unclassified grade received 0.

Results

Mean GCSE grade showed a correlation of r (1348) = -.13, p<.01 with the total TAI score. r (1348) = -.18, p<.01 with the worry component and r (1348) = -.07, p<.05 with the expectancy component. The influence of moderating variables is established using a hierarchical regression. Test anxiety scores are entered in the first step, the worry component and performance within the school aged population and as Zeidner (1990) notes, due to variations in cultural and socialisation practices, schooling, societal expectations and so forth, the results of previous work should not be uncritically generalised to other national populations.

The findings of this study confirm a small, but significant, inverse relationship between test anxiety and examination performance in a sample of GCSE students, which is moderated by year group and socio-economic background, but not gender or ethnic background. These findings support the conclusions of Hembree (1988) and Selipp (1991) that gender does not moderate the test anxiety – performance relationship, but not research suggesting that this relationship becomes stronger with age (Hembree, 1988). The extent to which the year group effect may be attributable to age differences is debatable due to the cross-sectional nature of the design and that students may be gaining a sense of efficacy and mastery over the level of material as they move into Year 11. Previous research has suggested that ethnic and socio-economic background do not moderate this relationship (Crocker, Schmitt & Tang, 1989, Zeidner, 1990), and while the findings of this study replicate this effect for ethnic background, a moderating effect was reported for socio-economic background. It should be noted that the conceptualisation of socio-economic background used in this study, based on labour relations, may differ to previous systems based on class.

References


