the ability steplength. It found that: (1) If getting full score, the examinee will be overestimated when making correct responses on difficult items. (2) If getting a zero score, the examinee will be underestimated when making wrong responses on easy items. (3) If getting a moderate score, the overestimation phenomenon and underestimation phenomenon will exist. In contrast, under the new GRM model, the overestimation and underestimation phenomenon can both be rectified. In CAT simulation under old GRM model, the high-ability examinee with a poor beginning will be underestimated, and the low-ability examinee with a good beginning will be overestimated. But using the new GRM model, the high-ability examinee can lower the bias, and the low-ability examinee with a good beginning will generally recover to the true value.

Generalisability analysis of competence model

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Work analysis method based on competency model is the key decision basis of human resource management. It helps HR to implement activities such as recruitment, training, salary administration, downsizing and so on. However, work analysis method which is based on competency model cannot estimate the reliability accurately. Nevertheless, generalisability theory can solve this problem as it is a modern reliability theory. This paper introduced the work analysis method that is based on competency model, and then discussed how to estimate the result of work analysis method through generalisability theory. Finally we used both generalisability theory and traditional method to analyse the work analysis data of one company, and compared the result. The result showed that generalisability theory worked better than the traditional method.

Reliability and validity of the self-compassion scale

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To test the reliability and validity of Self-Compassion Scale. data were collected from 440 university students and analysed by SPSS13.0 and LISREL8.70. The formal version of SCS consisted of 6 dimensions, including 26 items. The Cronbach's Alpha of dimensions and the total scale were 0.64-0.87. Six factors were obtained from exploratory factor analysis, accounting for over 55.09% of the total variance. Confirmatory factor analysis indicated that AGFI-CFI-NNFI ranged from 0.85 to 0.94, and RMSEA was 0.059. CSCS developed in the present study attains acceptable psychometric properties.

Mechanisms of virtual reality exposure therapy: the effect of the behavioural inhibition and behavioural activation systems

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Gray's (1976) theory distinguishes between two motivational systems that he is involved with as the behavioural activation system (BAS) and the behavioural inhibition system (BIS). Fowles (1980) has indicated that heart rate responses reflect the activity of the BAS, and electrodermal responses reflect the activity of the BIS. Both BAS and BIS are reliably activated during in-vivo exposure to

fearful situations. However, because of the constraints imposed by virtual reality (VR), we hypothesized that VR exposure to fearful situations would activate the BIS alone. To examine this hypothesis, a VR free-standing elevator simulation was presented to participants selected for high and low fear of heights in Beijing, China. As predicted, the high-anxious group strongly responded electrodermally (effect size d=1.82), but showed only minimal HR elevations during exposure (d=0.09), and little other cardiovascular or respiratory changes. The low-anxious control group showed little electrodermal and HR reactivity (d=0.19 and 0.09). A comparison with data from a previous study demonstrated that the BIS, but not BAS, is selectively activated during VR exposure, causing discordance between self-reported and commonly used physiological measures of anxiety, such as Foa and Kozak's (1986) emotional processing theory of fear modification, suggesting different mechanisms underlying VR and in-vivo exposure treatments, which explained the results. Future studies should make direct comparisons between real-life and VR exposure using the same subjects and procedures, and should consider cross-cultural effects.

Psychometric properties of the internet addiction test in Hong Kong Chinese adolescents

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The Internet Addiction Test (IAT; Young, 1998) is widely used to measure addictive use of the Internet. With evidence of its reliability and validity in adults, psychometric evaluation of the IAT is absent in adolescents. This study aimed to examine the psychometric properties of the IAT in Hong Kong Chinese adolescents. Eight hundred and forty-four adolescents (37.7% boys) aged between 11 and 20 years recruited from local high schools completed the IAT and the Chen Internet Addiction Scale (CIAS), and reported their duration and frequency of Internet use. Descriptive statistics indicated that 3.0% and 15.2% of our participants were addicted and were occasional problematic Internet users, respectively. Results of the EFA on the split-half sample revealed a one-factor solution. Compared with other plausible models, results of CFA indicated that Chang and Man Law's (2008) 18-item second-order 3-factor model fitted our data better (SB χ^2 = 502.39, df = 132, p < .001, NFI = 0.85, NNFI = 0.87, CFI = 0.88, RMSEA = 0.06). Despite the moderate goodness-of-fit, the IAT demonstrated satisfactory internal consistency (a=.93) and good concurrent validity, as suggested by its moderate correlations with CIAS (r=.46), and the average time spent online per day (r=.40 for weekdays; r=.37 for weekends). The IAT is generally acceptable as a measure of Internet addiction in Chinese adolescents, however, with room for improvement. Future investigation should examine, in depth, the latent factor contributing to Internet addiction in adolescents.

Factorial structure and measurement invariance of a short measure of five-factor model personality traits

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Studies assessing the factorial structures of various measures of Five-Factor Model (FFM) usually report poor fit to data, and often need to incorporate secondary ex post facto modifications and cross-loadings, to obtain less than optimal fit indices. This precludes meaningful group comparisons, as a sound factorial structure is a prerequisite to such analyses. The aim of the current study is to evaluate the factor structure of the Mini-International Personality Item Pool (Mini-IPIP; Donnellan, Oswald, Baird, & Lucas, 2006), and to assess its measurement invariance across samples, age group and gender. Two large samples were recruited (ns = 385 and 317). Confirmatory factor analysis yielded a first solution with equivocal results. However, following Marsh et al. (2010) strategy, and adding correlated uniquenesses as method factors to account for unmodelled facets, scores resulted in a satisfactory fit for a revised model (χ^2 = 475.30, df = 157, p = .01; CFI = .924; TLI = .909; RMSEA = .054; SRMR = .050). In addition, the resulting model proved to be quite stable and reasonably invariant (to the level of the full latent variance-covariance matrix) across samples, genders, and age groups, with invariance constraints needing to be relaxed for only two intercepts, and two uniquenesses, across samples and age-groups. Furthermore, the observed latent means differences across genders, and age-groups, confirmed the results from previous studies regarding age and gender differences in personality, thus supporting the construct validity of the Mini-IPIP.

Mindfulness awareness-attention scale: A five items version

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The goal of this research was to to develop a short form of the Mindfulness Awareness Attention Scale by selecting five items. A total of 329 students (41 men and 288 women) took part in this study. Firstly, we examined the factorial validity of the whole scale (15 items), then taking into account the factor loadings, corrected item-test correlation, Cronbach´s alpha and the theoretical importance, and selected the items for the shorter version. Next, we analysed the factorial validity of the short form. Then, to evaluate the agreement of both versions, we computed the Pearson correlation and the Gower index. Also, we compared the predictive accuracy of the short and the long form score by estimating a structural equation model (SEM) where mindfulness had an effect on autonomy (feelings of choice and will) and self-esteem. Fit indices showed adequate values for the long and the short form. Cronbach´s alpha for the long form was .854 and for the short .837. Pearson correlation and Gower index between the mean of 15 items and the mean of the 5 items short version was r = .884 and.926, respectively. As for the SEM, for the long form, the standardised effect of mindfulness on autonomy was .164, and on self-esteem was .235, while for the short version it was .175 and .208. In conclusion, this short form can be used as a rough proxy for the original version.

Assessing point and interval estimation for the indirect effect: Distribution of the product, bootstrap and Markov chain Monte Carlo methods