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SDR is a review of current issues in selection, assessment and development. It is not intended to be an academic journal and while papers are subject to editorial review not all are referred to independent referees. Any material intended for publication should be sent by e-mail if possible. The guideline maximum length is 2000 words.

The views expressed in articles do not necessarily represent those of the Editorial team or The British Psychological Society.

Editorial

WELCOME TO THE April Edition of *SDR*. We hope this edition finds you all well and enjoying the longer days of Spring.

Our first contribution to the review this month comes from Giles Burch. Giles explores some of the key competencies that organisations currently look for when selecting candidates. In particular, he looks at the areas of Creativity, Psychoticism and Emotional Intelligence and the links between them. Secondly, Graham Tyler presents us with a review of Psytech International's 15FQ+ questionnaire. Graham's paper is very comprehensive and covers a number of aspects of the 15FQ+ including its development and issues of reliability and validity, and comparisons to the original 15FQ and Cattells 16PF.

With the increase in computer and internet access, the issues surrounding selection and development online become more and more pressing. As such, our final article written by Ruth Price and Fiona Patterson from the Work Psychology Group at City University is very timely. They have undertaken a study to explore the psychological effects of receiving, completing and submitting on-line application forms. In particular, five psychological issues were examined; privacy, support, feedback, dehumanisation and self-selection. Four usability issues are discussed along with the implications for organisations and some practical recommendations for the future design of such forms.

We are also pleased to include two responses to past articles. Firstly, Hugh McCredie responds to a point made by Michael Gray (February, 2003) on the on-going issue of performance and personality. Secondly, K.W. Young takes up the debate surrounding structured interviews in relation to the article by Paul Taylor and Bruce Small (February, 2003). Finally, Christopher Ridgeway raises the question of whether there is a need for a verification procedure when using projective methods in occupational settings.

As John mentioned in the last edition, we still struggle each month to get enough articles. We are very committed to making every effort possible to produce each edition for you but we *really* do need your help in doing this - no articles or papers would ultimately mean the demise of *SDR* which would be a sad situation. Many thanks go, as always, to those who have contributed to this edition. We welcome your comments on any of the papers featured here and look forward to hearing from you soon.

Philippa Hain
On behalf of the Editorial team

A review of the 15FQ+ Personality Questionnaire

Introduction

THE FOLLOWING PRESENTS a review of the 15FQ+ questionnaire. The article presents a comparison of the 15FQ+ with its predecessor, the 15FQ, introduces some of the new features of this assessment and discusses practical issues, before reporting on the development of the questionnaire and citing international data in relation to norm groups, reliability and validity.

Introduction to the 15FQ+

The 15FQ+ is a normative, trichotomous response, personality test that has been developed by Psytech International as an update to the original 15FQ. Both versions of the 15FQ were designed for use in industrial and organisational settings. The original version of this assessment was first published in 1991 as an alternative to the 16PF series of tests. The original 15FQ was designed to assess 15 of the 16 personality dimensions that were first identified by Cattell and his colleagues in 1946. The 15FQ has been used widely throughout the world and now boasts an impressive array of norm groups, including applicants, non-applicants, management applicants, undergraduates, higher education workers and a number of local and international norms. The UK general population norm group consists of well over 20,000 individuals. The 15FQ's technical manual (which is available as a free download at Psytech's website) provides extensive validity data on a wide range of samples.

The updated 15FQ+

The 15FQ+ is a full revision of the original 15FQ, with the authors developing and trialling a completely new item set for the 15FQ+. The authors' stated aim was to produce a relatively short yet robust measure of Cattell's primary

Graham Tyler

personality factors. It had been known for some time that reasoning ability (or intelligence) can not be reliably measured by reasoning items included in untimed personality tests, as is the case with Cattell's Factor B. For this reason, Factor B was excluded from the 15FQ. However, for the 15FQ+, the authors have decided to deal with this problem by redefining Factor B as a 'metacognitive personality variable' termed intellectance. This does not assess intelligence *per se*, but rather a person's confidence in their intellectual ability; defined in the 15FQ+ manual as:

'...a self-reported superior level of intellectual capacity, a preference for, and enjoyment of, complex arguments and ideas. A self-reported superior level of: verbal ability, abstract reasoning ability and numerical ability.'

New features of the 15FQ+

In addition to the Intellectance scale, the 15FQ+ now includes criterion-referenced scales for both Emotional Intelligence (Goleman, 1996) and Work Attitude (Ones & Schmidt, 1992). These scores are calculated from a sub-set of 15FQ+ items that have been found to best predict well-validated measures of the relevant constructs. Furthermore, the 15FQ+ now incorporates an extensive range of response style indicators that include a dedicated Social Desirability scale, non-dedicated Faking Good and Faking Bad scales, and measures of Central Tendency and Infrequency. As well as producing a standard length test, which contains 12 items per scale (200 items in total) the authors have also produced a short form, containing six items per scale (100 items in total).

Development of the 15FQ+

The 15FQ+ was developed following what the authors term extensive item trialling. However, this is not reported in great detail in the manual. According to the authors, the 15FQ+ has been written in simple, clear and concise modern European Business English (Psychometrics Limited, 2002). While they report that the test items have been written to avoid culture, age and sex bias, only minimal data is reported in this regard in the technical manual. The authors' stated intention when developing the 15FQ+ was to reflect the full breadth of Cattell's original source traits, yet avoid producing narrow, highly homogenous 'cohesive' scales that measure no more than surface characteristics. To this end they state that the item's selection process was guided by the twin aims of maximising reliability, whilst maintaining the breadth of the original personality factors.

Practical issues

The 15FQ+ short-form takes approximately 15 minutes to complete and the standard-form around 30 minutes. It is possible to administer both forms in traditional paper-and-pencil formats, through the use of self-scoring answer sheets and integral profile charts, or through the use of the publisher's GeneSys™ Integrated Assessment Software. Either way, administration is straightforward via the use of detailed, standardised instructions, and scoring is either automated (when using the software) or a matter of collating scores from easy to use shaded boxes and transposing the item scores onto respective sten score boxes and a graphical profile chart. Global scores are calculated through the use of a calculator and the simple instructions provided on every answer sheet. It should be noted that for those who choose paper-and-pencil administration and then manual scoring of the questionnaire, some of the report options are not available, namely, the Fake Good, Fake Bad, Emotional Intelligence and Work Attitude scores. However, these options can be made available through the publisher's bureau service or subsequent input into the GeneSys™ software.

The 15FQ+ Global Factors and Primary Scales are reported in Tables 1 and 2 respectively.

Table 1: 15FQ+ Global Factors

E	Extraversion	Introversion
N	Low Anxiety	High Anxiety
O	Pragmatism	Openness
A	Independence	Agreeableness
C	Low Self-Control	High Self-Control

Table 2: 15FQ+ Primary Factors

fA	Distant Aloof	Empathic
fB	Low Intellectance	High Intellectance
fC	Affected by Feelings	Emotionally Stable
fE	Accommodating	Dominant
fF	Sober Serious	Enthusiastic
fG	Expedient	Conscientious
fH	Retiring	Socially-bold
fI	Hard-headed	Tender-minded
fL	Trusting	Suspicious
fM	Concrete	Abstract
fH	Direct	Restrained
fO	Confident	Self-doubting
fQ ₁	Conventional	Radical
fQ ₂	Group-orientated	Self-sufficient
fQ ₃	Informal	Self-disciplined
fQ ₄	Composed	Tense-driven

15FQ+ Norms

While the 15FQ+ continues to accumulate norm groups from around the world, in the current technical manual, only one norm group is reported. However, this is a large sample of 1186 individuals with a good gender breakdown of 561 males and 621 females (four unknown) and an acceptable 10 per cent ($n=111$) representation of ethnic minorities. The age range of the reported sample is 16–64, with a mean of 31.49 and a standard deviation of 11.15.

Reliability of the 15FQ+

The 15FQ+ has been used on a variety of samples, although the technical manual currently only reports alpha coefficients for a professional sample and two student samples. Table 3 (along-side) presents the alpha coefficients for each of the 16 personality factors for both the standard- (Form A) and short- forms (Form C) of the 15FQ+. All scales demonstrate good levels of internal consistency, when the length of the scales is taken into account. Most importantly, the alpha

Factor	Form A	Form A	Form C	Form C
	Student Sample (n=183)	Professional Sample (n=325)	Student Sample (n=183)	Professional Sample (n=325)
fA	0.83	0.78	0.64	0.64
fB	0.77	0.80	0.62	0.71
fC	0.80	0.77	0.60	0.63
fE	0.80	0.79	0.60	0.66
fF	0.75	0.78	0.63	0.63
fG	0.85	0.81	0.60	0.64
fH	0.85	0.81	0.68	0.68
fI	0.74	0.77	0.64	0.63
fL	0.78	0.77	0.66	0.62
fM	0.80	0.79	0.64	0.64
fN	0.79	0.78	0.67	0.67
fO	0.82	0.83	0.67	0.69
fQ ₁	0.81	0.79	0.60	0.72
fQ ₂	0.82	0.78	0.67	0.62
fQ ₃	0.78	0.76	0.66	0.63
fQ ₄	0.84	0.81	0.60	0.62
SD	0.72	0.70	Not quoted	Not quoted
n=	183	325	183	325

coefficients are not so high as to suggest these factors are measuring narrow surface traits. The lower levels of reliability found in the short-form scales are to be expected, and reflect the relative brevity (six versus 12 items) of the Form-C scales.

Table 4 continues to provide evidence of the acceptable levels of reliability for the 15FQ+ scales. On this sample, both Factor fB (Intellectance) and Factor fM (Concrete-Abstract) fall slightly below UK acceptable levels of reliability. However, this may potentially reflect educational and cultural factors. The drop in alpha below the usually acceptable 0.70 level is minimal and the mean alpha for this sample remains high for personality assessment at 0.75.

Psytech South Africa provide further evidence of internal consistency reliability on their website. Overall, the 15FQ+ can be assumed to be a reliable measure of personality in South Africa, although alpha levels are generally lower than in UK samples. Despite this, the alphas do compare favourably to those obtained within South Africa from other measures of personality. Psytech South Africa does acknowledge that literacy and educational levels do, however, place constraints upon

fA	0.71
fB	0.67
fC	0.76
fE	0.75
fF	0.71
fG	0.81
fH	0.82
fI	0.71
fL	0.75
fM	0.68
fN	0.73
fO	0.81
fQ ₁	0.80
fQ ₂	0.72
fQ ₃	0.77
fQ ₄	0.78
Mean Alpha (n=226)	0.75

the test's use and interpretation, and do not recommend using the 15FQ+ for broad entry-level screening outside the UK; a point supported by the current author during experience of using the 15FQ+ in the United Arab Emirates and Saudi Arabia.

Validity of the 15FQ+

Table 5 provides data from 70 Psytech International course delegates who completed both the 15FQ and 15FQ+ as part of their practical experience. The table shows that ten of the corrected correlations between the 15FQ and corresponding 15FQ+ scale reach or approach unity, providing strong support for the construct validity of these factors. Of the remaining six factors, all but two correlate substantially with their respective 15FQ dimensions. The 15FQ+ dimensions fA (Empathic) and fQ₄ (Tense-driven) however, show only moderate correlations with their 15FQ counterparts. These modest correlations may reflect a subtle change in scale interpretation between the 15FQ and the 15FQ+ tests. Factor fA in the 15FQ+ measures a 'warm-hearted, empathic concern for, and interest in, other people', rather than sociability and interpersonal warmth as measured by the 15FQ dimension (Outgoing). A similar explanation is provided in the 15FQ+ manual for the moderate correlation between 15FQ+ fQ₄ its corresponding 15FQ dimension.

The 15FQ+, as well as the original 15FQ, has been developed to measure the original source traits identified by Cattell and his colleagues. Therefore, one would expect to find evidence of construct validity when comparing the 15FQ+ with versions of the 16PF. Table 6 (alongside) provides data from a student sample of 183 individuals, which further supports the construct validity of the 15FQ+.

All of the correlations in the above table are substantial and many of the corrected correlations approach unity. This demonstrates that the 15FQ+ is measuring factors that are broadly equivalent to those originally identified by Cattell and colleagues.

In addition to the data referred to in Table 6, the technical manual quotes yet further construct

Table 5: Correlations between 15FQ+ factors and the original 15FQ

15FQ+ Factor	15FQ Uncorrected	15FQ Corrected
fA	0.32	0.43
fB	-	-
fC	0.54	0.75
fE	0.65	0.93
fF	0.76	1.00
fG	0.74	0.97
fH	0.88	1.00
fI	0.71	0.98
fL	0.78	1.00
fM	0.63	0.84
fN	0.55	0.77
fO	0.74	0.95
fQ ₁	0.86	1.00
fQ ₂	0.78	1.00
fQ ₃	0.80	1.00
fQ ₄	0.29	0.40

validity data. For example, relationships exist between 15FQ+ factors and BAR-ON EQI scores, the Jung Type Indicator and the NEO PI-R.

Little criterion-related validity is available for the 15FQ+. Whilst disappointing, this is to be expected because of the recent publication of this test. Two studies are reported by Psytech South Africa (see www.psytech.co.za), one highlights the ability of the 15FQ+ to predict performance appraisal outcomes for managers, supervisors and equity managers from a manufacturing company, and the other shows how various scales of the 15FQ were able to predict insurance policy sales.

Summary and Conclusions

The 15FQ+ is a relatively new, normative, factor-based measure of occupational personality, developed as an update to the much used 15FQ, which was first published in 1991. The 15FQ+ has demonstrated, at an international level, more than acceptable levels of reliability, as well as good construct validity and appears to be measuring the same source traits as those discovered by Cattell. Users familiar with the 16PF series can easily transfer their test interpretation skills to this new instrument. The 15FQ+ is distributed by Psytech International and is available to Level B (Intermediate) qualified users (or international

Table 6: Correlations of the 15FQ+ factors with 16PF (Form A) and 16PF5

15FQ+ Factor	16PF (Form A)		16PF5	
	Uncorrected	Corrected	Uncorrected	Corrected
fA	0.31	0.37	0.55	0.70
fB	0.10	-	0.34	-
fC	0.59	1.00	0.81	1.00
fE	0.68	0.99	0.82	1.00
fF	0.72	0.98	0.81	1.00
fG	0.55	0.89	0.79 ¹	0.75
fH	0.78	0.99	0.88	1.00
fI	0.50	0.75	0.47	0.56
fL	0.29	0.52	0.60	0.79
fM	0.26	0.65	0.79	1.00
fN	0.30	0.70	0.25	0.31
fO	0.68	0.99	0.83	1.00
fQ1	0.29	0.43	0.60	0.84
fQ2	0.51	0.85	0.81	1.00
fQ3	0.30	0.50	0.57 ²	1.00
fQ4	0.69	0.94	0.69	0.89
FG	0.49	0.72	-	-
FB	0.48	0.73	-	-

¹ Correlation with 15FQ+ Factor fQ3.

² Correlation with 15FQ+ Factor fG.

Reflects fact that the meaning of these two factors has been reversed in 16PF5 and provides further evidence that 15FQ+ is measuring original source traits identified by Cattell and colleagues.

equivalent) without the need for conversion. The assessment is currently being used throughout the world, including: Australia, New Zealand, Malaysia, Singapore, South Africa, The United Arab Emirates and the UK and Europe, as an alternative to the 16PF series of tests. When administered to candidates for whom English is not their first language, particular care should be taken to ensure understanding of the items and accurate interpretation of results. Despite this, the 15FQ+ has frequently demonstrated exceptional construct validity internationally, as well as good criterion-related validity in South Africa. The 15FQ+ is at an advantage when compared with the 16PF5 due to its ease of scoring, the acceptability of the language and improved reliability on a number of the factors. Psytech report that they are continuously adding to international norms and progressing with further validation studies, foreign language versions of the assessment and the provision of controlled Internet administration.

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Further information:

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