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HR SUCCESS MULTIPLIED

RAPID PERSONALITY QUESTIONNAIRE
RELIABILITY & VALIDITY STUDY

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CONTENTS

THE RPQ REVISION

Background

It is essential that psychometric questionnaires are kept up to date. As language usage changes items can become less effective and norms can shift. With this in mind we decided to conduct a major research project to see what improvements could be made to the RPQ. To maximise the effectiveness of the revision we started from an initial pilot stage. This involved the generation of 404 sample items to be trialled.

A large and broad population completed the pilot questionnaire and the data was analysed using the same statistical methodologies as originally used when the RPQ was first developed.

RPQ 2nd Edition

All three versions of the RPQ were amended as a result of the research project. The final item selection successfully achieved several objectives.

- Very close Construct match to RPQ Edition 1 to ensure that the new Edition could be used by clients without losing the benefit of previously collected data. This 'backwards compatibility' also means no new user training is required.
- Improved psychometric properties with increased Reliability and reduced scale inter-correlations.
- Items are generally understood by a broader population than previous edition.
- The RPQ-3 revised for use with lower literacy populations.
- Improved Team Types algorithms.
- Foundations laid for the development of a Job Analysis Questionnaire and 360° version.
- The questionnaire layout was altered and a new logo introduced in order to minimise the chances of Edition 1 questionnaires being used in error.

RELIABILITY AND VALIDITY

Reliability

Reliability is a statistical measure of an instrument's inherent accuracy. There are various ways of calculating reliability and the table below details the results for the most common alternatives.

- Cronbach's Alpha is considered the best measure of internal consistency reliability as it correlates all the items in a scale with all the others.
- Test Re-test correlates the scores obtained by a population on two separate occasions. The interval with this study was one month.
- Parallel Forms is the correlation of the scores obtained in Section A and Section B.
- Split Half is the correlation of the scores obtained through a random choice of half the items in a scale with the other half.

Table 1. RPQ Edition 1 - Reliability

SCALE	CRONBACH'S ALPHA	TEST RE-TEST	PARALLEL FORMS	SPLIT-HALF
Extraversion	.86	.93	.73	.84
Confidence	.76	.85	.61	.76
Structural	.79	.90	.62	.77
Tough-Minded.	.76	.85	.64	.78
Conformity	.77	.90	.66	.80

Table 2. RPQ Edition 2 - Reliability with Standard Error of Measurement

SCALE	CRONBACH'S ALPHA	S.E.M.
Extraversion	.84	2.17
Confidence	.88	1.90
Structural	.90	1.74
Tough-Minded.	.85	2.11
Conformity	.80	2.40

VALIDITY

Face Validity

Face validity in itself is insufficient to justify the use of a questionnaire. There are, however, many questionnaires which are inappropriate for use in most occupational settings because their format and output does not appear credible to those who would sit them or the line managers who would receive the results. Accordingly we wanted to ensure that the 'look and feel' of the RPQ was appropriate.

A sample of subjects from the standardisation study were administered a semi-structured telephone-interview concerning the proposed interpretation of their scores. Face validity was reported to be high by over 90% of such interviewees. Whilst we rely on other reliability and validity data to confirm the relevance and accuracy of the RPQ, this study does show that users are comfortable with the RPQ.

Construct Validity

The Rapid Personality Questionnaire is a normative instrument based on trait theory. We developed it to reliably measure the Five Factor model of personality - commonly called The Big Five. Since the other widely used occupational trait based questionnaires take significantly longer to administer and score we wanted to demonstrate the extent to which the RPQ reliably measures the same constructs (traits). We felt that this would not only demonstrate the integrity of the RPQ, it would also enable users of these other measures to rapidly integrate the RPQ into their testing procedures.

We decided to correlate RPQ scores with those of Form A of the Sixteen Personality Factor Questionnaire (16PF) and Concept 5.2 of the Occupational Personality Questionnaire (OPQ). Several independent studies took place. The first was at a major building society where a number of their managers completed the three questionnaires at the same sitting. The second was at Saville & Holdsworth Ltd (SHL) where delegates to their training courses completed the RPQ and the OPQ. The third study was at a Government Agency employing very large numbers of Claims Processing personnel.

The resulting data was separately analysed both by an independent occupational psychologist commissioned by Personality Systems Ltd and by Saville & Holdsworth Ltd. It was then consolidated for the purpose of this report. The 16PF data was analysed in-house at The Test Agency.

THE RPQ AND THE 16PF

Table 3. Scale Inter-correlations (N = 707; $p < .001$: **; $p < .01$: *)

16PF SCALE	EXTRAV.	CONFID.	STRUCT.	T-MINDED	CONFORM.
A (Outgoing)	.2516**	.1535**	.0552	-.0571	-.0318
B (Intelligent)	-.0662	-.0024	.0640	-.0281	.0516
C (Emotional)	.1037*	.2902**	.1045*	-.1252*	.0524
E (Assertive)	.5010**	.3454**	-.0356	.1518**	-.4176**
F (Happy-go-lucky)	.4246**	.3694**	.0006	-.1040*	-.3254**
G (Conscientious)	.0646	.0570	.3375**	-.1150*	.3412**
H (Venturesome)	.5663**	.4796**	.0396	-.0856	-.1440**
I (Tender-minded)	-.1848**	-.1816**	-.0944	-.1410**	-.0206
L (Suspicious)	.1923**	.0066	-.0944	.2155**	.2532**
M (Imaginative)	-.0610	.0397	-.0404	-.0297	-.0703
N (Shrewd)	-.1989**	-.1386**	.0682	-.0099	.1244*
O (Apprehensive)	-.2417**	-.3899**	-.1152*	.1351**	-.0133
Q1 (Experimenting)	.2231**	.1584**	-.0945	.1451**	-.3537**
Q2 (Self-sufficient)	-.3146**	-.2285**	-.0750	.1600**	-.0281
Q3 (Controlled)	-.0061	.1353**	.3487**	-.2182**	.3458**
Q4 (Tense)	-.0847	-.3326**	-.1658**	.2212**	-.2023**

Table 4. Summary of which 16PF scales correlate closely with RPQ scales

RPQ SCALE	16PF SCALE	
Extraversion	Venturesome (H) Assertive (E) Happy-go-lucky (F) Self-sufficient (Q2) - Outgoing (A) Apprehensive (O) -	Experimenting (Q1) Shrewd (N) - Suspicious (L) Tender-Minded (I) Emotional (C)
Confidence	Venturesome (H) Apprehensive (O) - Happy-go-lucky (F) Assertive (E) Tense (Q4) - Emotional (C)	Self-sufficient (Q2) - Tender-Minded (I) - Experimenting (Q1) Outgoing (A) Shrewd (N) - Controlled (Q3)
Structural	Controlled (Q3) Conscientious (G) Tense (Q4) -	Apprehensive (O) - Emotional (C)
Tough-Mindedness	Tense (Q4) Controlled (Q3) - Suspicious (L) Self-sufficient (Q2) Assertive (E) Experimenting (Q1)	Tender-Minded (I) - Apprehensive (O) Emotional (C) - Conscientious (G) - Happy-go-lucky (F) -
Conformity	Assertive (E) - Experimenting (Q1) - Controlled (Q3) Conscientious (G) Happy-go-lucky (F) -	Suspicious (L) Tense (Q4) - Venturesome (H) - Shrewd (N)

CRITERIA BASED VALIDITY STUDIES

Overview

Several validity studies correlating performance criteria with RPQ scores have been carried out. Four of them are reported in this section of the manual.

Performance linked validity studies typically suffer from two problems. The first is the difficulty of defining performance and the second is how to accurately and objectively measure it. For example, which is the better salesperson: the one who achieves the highest level of sales or the one who works harmoniously with his colleagues? This type of problem becomes even more difficult when there is no apparent criterion - such as sales performance - against which a person can be ranked. Additionally a person's performance is affected by many environmental considerations such as the effectiveness of his manager. Accordingly personality is just one of several factors in the performance equation.

This means that the performance rating is often a subjective assessment made by the employee's manager. This once again introduces problems. Manager ratings can be very unreliable and prone to being overly affected by recent events. An employee who is very effective in all respects except his relationship with his manager is also likely to be poorly rated by his manager when this is not an accurate reflection of his overall performance. The above reasons mean that obtaining good validity results in studies where performance is the criterion is very rare for personality questionnaires. The fact that the RPQ does so well is powerful evidence in the instrument's favour.

The TSB study is reported in some detail whereas only the main points are included for the other studies. We welcome data from other RPQ performance based validation studies which we can include in future editions of the Manual. Where necessary organisation identities can be disguised.

TSB Branch Manager Validity

This study was conducted at TSB Bank correlating personality and performance data. The initial purpose of the project was to evaluate the usefulness of the RPQ as a tool to help in the self-development of Branch Managers. However in the course of the first stages of the study in the Bristol pilot area, it became apparent that there were two relatively distinct personality types within the Branch Manager (BM) population. This led us, and the independent consultant leading the project, to probe into whether these two groups of individuals performed their tasks differently.

We then asked for performance data on these BMs to correlate with the personality data. The results of this study were so positive that they justified a more comprehensive investigation into the role of personality in the performance of Branch Managers at TSB. This report represents the conclusions of both studies encompassing 202 BMs.

The first stage of the study was when nearly 80 Branch Managers from the Bristol Area completed the RPQ. The initial purpose of this project was to evaluate the reactions of the BMs to their personality profiles and the text reports that were generated by the RPQ. The RPQ was chosen because it is a very quick yet valid approach to personality assessment.

Senior Branch Managers administered the questionnaires and gave the feedback to their BMs. When the data from this pilot study was sent to us, our first action was to look at the average scores of the group. The results seemed rather uninteresting as the norms for the Bristol BMs were very similar to those of the general UK working population.

This indicated that their personalities did not show any specific bias towards characteristics that one might associate with bank managers. Instead it looked as if personality had not played a part in the selection of these individuals. If, for instance, "self-discipline and attention to detail" were chosen criteria for BM, then we would have expected to see higher than average scores on the RPQ scale that measures this (Structural).

In analysing the data in greater detail we did notice that the distribution of individual scores showed two relatively distinct types of people. This led us to wonder whether these two groups might perform their duties in different ways. By adding the TSB's performance data on the high and low performing BMs to the analysis, extremely powerful conclusions began to emerge. These are reported in more technical detail later.

However the initial conclusions pointed to the fact that there were 3 personality traits, as measured by the RPQ, which differentiated between the TSB's highest and lowest performing BMs. Indeed these two groups showed quite opposite characteristics across the 3 scales.

The results can be summarised by showing the following differentiating personality factors:

Table 5

HIGH PERFORMERS	LOW PERFORMERS
Extraverts	Introverts
Confident	Cautious
Non-Conformists	Conformist

The RPQ scales are bi-polar and we have provided a descriptive name for each end of the five RPQ scales. Table 5 details the three RPQ scales which significantly correlated with performance. The table lists which end of the scales correlated with the high and low performers.

The levels of statistical significance of the above results varied between 95% and 99.9% levels of certainty, indicating that personality has a direct impact on the performance of BMs.

As this study only included 76 people it was agreed that we should extend the project to include other TSB Regional Areas. Our purpose was to both increase numbers (and therefore our confidence in the results) and to filter out any spurious factors that may be caused by the Bristol Area's specific economic conditions.

The final analysis used data from 202 BMs from the Bristol, Cardiff and Birmingham Areas. In addition, as we had only used Overall Comparative Performance as the benchmark in the Bristol study, it was decided that we would include the Bank's three other measures of performance in the analysis.

The final performance criteria are listed in Table 6.

Table 6

TSB PERFORMANCE CRITERIA & ABBREVIATIONS	
Customer Service Practice	CSP
Managerial Practices and Self-Development	MPSD
Achievement of Business Objectives	ABO
Overall Comparative Performance	OCP

The results confirmed the first study with *Extraversion, Confidence* & *Non-Conformity* correlating strongly with MPSD, ABO and OCP. Additionally, CSP correlated very closely with Extraversion and Non-Conformity.

The levels of confidence we can have in this data also remained consistently high, varying between 99.6% and 99.9% in terms of statistical certainty.

Though statistical probability is a necessary way of looking at the significance of such data, we should also examine whether the results make sense.

The RPQ personality profiles of the most successful BMs can be broadly categorised as those of salespeople, though of the relatively patient and organised kind. We enquired of TSB whether this conclusion made sense. Our conversations seemed to confirm that this was in line with the changes that the retail network had undergone over the last two years. It seems that a great deal of the paperwork and administrative functions, previously residing at branch level, have been placed in customer service centres. This means that the high street branches have became more focused on *selling* services to local customers.

Therefore TSB's assessment of successful branch performance has been weighted more towards selling services rather than administrative efficiency. This in turn validates the conclusions reached by our project: showing that the personality profiles of the Bank's most successful BMs are closely related to those we have observed in salespeople.

In addition, it helps explain why the more reticent, shy and cautious BM, who relies heavily on traditional banking procedures, is finding it difficult to perform to the Bank's new, more aggressive, sales-led criteria.

The crux of the business benefits which could emanate from the study revolve around the concept that *Performance = Environment x Ability x Personality.* As most of TSB's BMs have a similar depth of knowledge of banking procedures based in a similar environment, i.e. *Environment* and *Ability*, the area that has room for improvement is *Personality*.

People work better if the demands of their job closely match their own preferred styles of behaviour. The outcome of the study has produced a validated profile of the personality of Branch Managers who will find a close empathy between their job and their natural behaviour.

RPQ SCORES & PERFORMANCE RATINGS

The project was conducted in two stages. **Stage 1** involved 76 BMs from the Bristol Area, the region chosen for the evaluation of the RPQ. **Stage 2** consisted of all the data from Stage 1 and an additional 126 BMs drawn from the Birmingham and Cardiff Areas, giving a total of 202. The purpose of the analysis was to identify whether personality traits have a significant impact on performance within the BMs at TSB. This was done by going through a set of standard statistical procedures.

Table 7. Mean scores of the Bristol Pilot Area participants. N=76

RPQ FACTOR	MEAN	SD
Extraversion	11.0	4.0
Confidence	11.0	4.0
Structural	10.5	3.5
Tough-Mindedness	9.0	3.5
Conformity	10.5	4.5

The first step was to calculate the BM's average RPQ scale scores. These are listed in Table 7. The table shows us that the average or "Norm" of the Bristol BMs is very close to the UK averages, or those of a random population. The conclusion from this data is that personality does not play a large part in the *selection* of BMs.

Table 8. Mean scores of the Highest and Lowest performing BMs in the group

HIGH PERFORMERS COMPARED TO LOW PERFORMERS				
RPQ FACTOR	MEAN	N	MEAN	N
Extraversion	**13.5**	11	**7.5**	10
Confidence	**12.0**	"	**7.0**	"
Structural	11.5	"	9.0	"
Tough-Mindedness	9.0	"	10.0	"
Conformity	**8.0**	"	**13.0**	"

The next step was to obtain performance data on the managers and see what affect introducing this variable has on the data. We calculated average RPQ scale scores for the top 11 and bottom 10 performers and the results are in Table 8. The data clearly revealed that there were large differences between the groups in three of the scales: *Extraversion, Confidence* and *Conformity*.

Our next step was to understand whether the differences in scores, shown by the two groups in the Table 8 were *statistically significant* and not merely a product of chance. This is done by looking at the levels of correlation between the variables concerned and also by calculating the T-Value and thus computing the probability of chance.

Table 9. For * p = .01 (or only 1.00% that it is chance). For ** p = .001 (or only 0.1% that it is chance)

RPQ FACTOR	CORRELATION
Extraversion	.73**
Confidence	.65*
Structural	.33
Tough-Mindedness	-.24
Conformity	-.52*

Table 9 shows the measure of the relationship between **RPQ Scales and Performance**. The numbers (correlation co-efficients) with an asterisk * are those where significant relationships have been found. Note that Extraversion and Confidence have a positive relationship and that Conformity has a negative one. The probability of this occurring by chance is denoted by **p**.

Therefore one can state that it is between 99% and 99.9% certain that the above relationships are genuine. Another test to determine whether the differences in the scores of the two groups are due to chance or not, is the T-Test. From the T-Value one can compute the probability of chance.

Table 10

RPQ FACTOR	T-VALUE	2 TAIL PROBABILITY
Extraversion	4.60	.001
Confidence	3.85	.001
Structural	1.70	NS
Tough-Mindedness	0.93	NS
Conformity	2.53	.05

Table 10 shows that the probability of *Extraversion* and *Confidence* being significant are 99.9% and that of *Conformity* 95%. The other two factors showed no significance. The conclusion from Stage 1 was that there is very powerful statistical evidence to show that the difference in personalities, within the Bristol Area Branch Managers, plays an important role in their overall performance rating. It was decided to expand the project to encompass more BMs from different regions to see if similar data would be obtained.

Stage 2 increased the number of participants to 202, involving BMs from the Birmingham and Cardiff Areas. The **Mean Scores** of this larger sample was again in line with the UK average and very close to those we had found in the Pilot Area.

We set out to look for the correlations we had found earlier and to see if the results replicated themselves. We also decided to add additional performance data to the analysis, namely the competencies that go towards the **O**verall **C**omparative **P**erformance (OCP) that we had used in the Bristol-based pilot study. These have been abbreviated to **C**ustomer **S**ervice **P**ractice, **M**anagement **P**ractices & **S**elf **D**evelopment, **A**chievement of **B**usiness **O**bjectives and OCP (see Table 6).

Table 11

VARIABLES	RPQ 1	RPQ 2	RPQ 3	RPQ 4	RPQ 5
CSP	**.21** (.003)				**-.26** (.001)
MPSD	**.29** (.001)	**.20** (.004)			**-.29** (.001)
ABO	**.31** (.001)	**.20** (.004)			**-.29** (.001)
OCP	**.33** (.001)	**.21** (.002)			**-.33** (.001)

Table 11 shows where *significant relationships* were found between the competencies of the 202 BMs and their RPQ scales. The first figure is the **r** value showing the strength of the correlations and the figures in brackets are the **p** values which show the degree of certainty of the relationships being **other** than chance. In **p** values, significance starts at **.05** (95%) and increases the smaller the figure. Where there are gaps in the matrix, this means that *no significant link* has been found between the variables.

From this we can draw some very strong conclusions, namely that:
- Branch Managers who are more Extravert, Confident and Non-Conformist than the average score significantly higher on the competencies measured by MPSD, ABO and OCP.
- Branch Managers who are more Extravert and Non-Conformist than average score significantly higher on the competency measured by CSP.

Top & Bottom Performers

In addition we have studied the **15** Top and **15** Bottom performers within this sample of 202 BMs. Table 12 describes the mean scores of this group and the probability that the differences are **significant** and **not** due to chance.

Table 12. N = 15

TOP PERFORMERS COMPARED TO BOTTOM PERFORMERS			
RPQ FACTOR	MEAN	MEAN	P VALUE
Extraversion	11.5	8.0	**.007**
Confidence	11.0	8.0	**.028**
Structural	11.0	10.0	
Tough-Mindedness	8.5	10.0	
Conformity	10.5	13.5	**.025**

Once again the key *differentiating* personality factors are the same 3 that have been consistently identified throughout the project.

The processes we have gone through, in order to identify whether personality has a bearing on the performance of Branch Managers, have been very thorough and conclusive. The study clearly demonstrates that the RPQ can differentiate between high and low performers **both** statistically and sensibly.

With the help of the Bank we are now in a position to draw up a *validated* personality profile for the future selection of Branch Managers. If the other previous selection criteria, such as *experience*, *qualifications* and *track record* remain the same, there is a very strong possibility that the Bank will see a direct improvement in the performance of its future Branch Managers.

Customer Service Officer Validity

This is a short report on a concurrent validation study carried out by an independent occupational psychologist. It examines the relationship between RPQ scores and job performance ratings for a group of 93 Customer Service Officers (CSO) at a major national public sector organisation which deals with the public.
The CSO is responsible for :

- answering customer enquiries by telephone or in writing,
- dealing with customer complaints, some of which may be difficult to deal with.

The officer is expected to gather all the necessary details from the caller in order to satisfactorily address an enquiry or complaint. In the majority of cases the officer will have to make other calls, normally to other departments within the organisation, to gather more information relevant to the customer's concern. In all cases, the CSO is responsible for getting back to the customer and informing him of the outcome of such follow-up calls.

Sample

The sample descriptions were:

Sex: 36 Males (39%) ; 57 Females (61%)

Age :   Mean = 32 years. Range = 20 to 57 years

Performance Criteria

Seven key performance criteria were identified based on work carried out by a group of occupational psychologists. These are listed in Table 13.

Table 13

PERFORMANCE CRITERIA	
Oral Communication	Information Checking & Accuracy
Written Communication	Organisation
Team Working	Resilience
Problem Solving	

Performance rating forms were distributed and work performance ratings gathered, as assessed by line managers. The ratings were based on an A to F rating scale with each rating point separately defined.

Results

The scores for the RPQ and the performance ratings were correlated using a simple Pearson's *r.* correlation These are listed in Table 14. Correlation coefficients with statistically significant values have been indicated with an asterisk.

Table 14

VARIABLES	RPQ 1	RPQ 2	RPQ 3	RPQ 4	RPQ 5
Oral Communication	-.06	.01	.02	-.22*	.06
Written Communication	.04	-.11	.20*	.04	.04
Team Working	-.05	.06	.04	-.15	.09
Problem Solving	.15	.00	.07	-.13	-.04
Information Checking	-.06	-.05	.12	-.09	.20*
Organisation	.10	.03	.20*	.20	.05
Resilience	-.01	.21*	.00	.00	.05

A one-tailed test of significance was used as predictions were made as to the direction of the relationship between the ratings and the RPQ scales.

As part of this study, experts were asked to predict the possible relationships. Five of the six predicted significant relationships were found to be significant whilst five of the six possible *significant* coefficients were predicted. If a one-tailed test had been used on the correlation coefficient for Organisation/RPQ 4 (Tough-Mindedness), this would also be significant. Since no prediction was made, a two-tailed test was correctly applied. Therefore this coefficient is not significant.

Conclusions

The results show that there was a significant relationship between the RPQ and five of the seven ratings. Table 15 shows which scale is related to which rating.

Table 15

RATING	RPQ SCALE	CORRELATION
Oral Communication	Tough-Mindedness (-)	-.22
Written Communication	Structural (+)	.20
Information Checking and Accuracy	Conformity (+)	.20
Organisation	Structural (+)	.20
Resilience	Confidence (+)	.21

As can be seen above, the RPQ successfully predicted **five** of the seven ratings.

- Those subjects who were less Tough-Minded were likely to be the better oral communicators. Benevolent individuals are more sensitive to the needs and requirements of others and tend to able to empathise and assist accordingly.
- High scorers on the Structural scale were likely to more highly rated on their organisational skills and their ability at written communication. Subjects who prefer to adopt a structured approach are more likely to be seen as organised. There is also a suggestion that there is quite a formal approach to written communication.

- Those respondents who preferred to be seen as Conformists were likely to be seen as the better performers on the 'Information Checking and Accuracy' rating. This suggests that there is quite a distinct procedural approach required for this job.
- The final relationship suggests that the more confident an individual is, the more likely he is to be resilient.

The two ratings which were not successfully predicted by any of the RPQ scales were Problem Solving and Team Working.

- The lack of relationship between Problem Solving and the RPQ scales is not unexpected. Problem Solving is closely linked to cognitive skills and is likely to be more successfully predicted by a combination of cognitive ability tests and personality instrument than by a personality instrument alone.
- The lack of relationship between Team Working and the RPQ scales is less expected. Possible reasons may involve the low amount of variance in the Team Working ratings and the unexpectedly low average score on Extraversion (the scale predicted to be most significantly related). 84.9% of the subjects received a rating of A to C (15.1% received D to F); the average score of 8.58 for Extraversion is extremely low for a customer service group.

Retail Sales Staff Validity

This is a short report on a concurrent validation study carried out by The Test Agency. It examines the relationship between RPQ scores and job performance ratings for a group of 100 Retail Sales Staff working for a large supermarket chain.

Sample

The sample descriptions were:

Sex: 37 Males (37%) ; 63 Females (63%)

Age :   Mean = 26.72 years, SD = 9.87 years. Range = 17 to 67 years

All the retail staff assessed were current full-time sales assistants.

Performance Criteria

Nine key performance criteria were identified based on work carried out by the organisation's Human Resources Department. There were three further criteria however these were knowledge-based and therefore excluded from the study. The performance criteria are listed in Table 16.

Table 16

PERFORMANCE CRITERIA	
Relating of Customers	Resilience
Quality Orientation	Team Working
Customer Focus	Organisation
Oral Communication	Using Initiative
Reliability	

Performance rating forms were distributed and work performance ratings gathered, as assessed by line managers. All the ratings assessed used a six-point rating scale.

Results

The scores for the RPQ and the performance ratings were correlated using a simple Pearson's *r* correlation. These are detailed in Table 17. Correlation coefficients with statistically significant values have been indicated with an asterisk.

Table 17. * (P > .05) ** (P > .01). (N = 100)

VARIABLES	RPQ 1	RPQ 2	RPQ 3	RPQ 4	RPQ 5
Relating to Customers	.02	.28**	.11	-.29**	-.12
Oral Communication	.02	.28**	.08	-.27**	-.19
Team Working	-.01	.05	.12	-.24*	-.11
Quality Orientation	-.02	.02	.23*	-.06	.10
Reliability	-.16	.01	.27**	-.17	.13
Organisation	-.05	.01	.18	-.05	.08
Customer Focus	-.23*	-.03	.09	-.23*	.09
Resilience	-.07	.21*	.19	-.28**	-.01
Using Initiative	.06	.08	.17	-.06	-.02

Conclusions

Table 17 reveals that there was a significant relationship between the RPQ and **seven** of the **nine** ratings. Table 18 shows which scale is related to which rating.

Table 18

RATING	RPQ SCALE	CORRELATION
Relating to Customers	Confidence	.28**
Relating to Customers	Tough-Minded	-.29**
Quality Orientation	Structural	.23*
Customer Focus	Extraversion	-.23*
Customer Focus	Tough-Minded	-.23*
Oral Communication	Confidence	.28**
Oral Communication	Tough-Minded	-.27**
Reliability	Structural	.27**
Resilience	Confidence	.21*
Resilience	Tough-Minded	-.28**
Team Working	Tough-Minded	-.24*

- Staff who were *more Confidence* and those who were *less Tough-Minded* were likely to be rated as better at relating to customers, as the better oral communicators and as being more resilient. Benevolent individuals are more sensitive to the needs and requirements of others and tend to able to empathise and assist accordingly. This is particularly true where the individuals concerned are confident and can exhibit this confidence to the people they are serving.
- High scorers on the *Structural* scale were likely to more highly rated on their quality orientation and their reliability. Subjects who prefer to adopt a structured approach are more likely to be seen as attending to detail and ensuring that accuracy is maintained.
- Those respondents who preferred to be seen as *less Tough-Minded* were likely to be seen as the better team workers. As previously mentioned, low scorers on *Tough-Mindedness* are more likely to be sensitive to the needs and requirements of their fellow workers and tend to able to empathise and assist accordingly.
- Those individuals who were low scorers on Extraversion and those who were low scorers on *Tough-Mindedness* were likely to have a higher level of *Customer Focus*. It suggests that staff who are concerned about others and tend to adopt a less pushy approach to their customers are the more successful performers on this rating.
- The two ratings which were not successfully predicted by any of the RPQ scales were Organisation and Using Initiative.
- The lack of relationship between *Organisation* and *Using Initiative* and the RPQ scales is unexpected. Possible reasons may involve the low amount of variance in the ratings.

Telephone Sales Representative Validity

This is a short report on a concurrent validation study carried out by The Test Agency. It examines the relationship between RPQ scores and actual sales job performance data for a group of 59 sales representatives working for a telephone insurance company.

These sale representatives were responsible for:
- handling incoming calls, answering customer enquiries and giving customers quotes on their stated insurance needs,
- following up leads previously established by field sales representatives

Sample

The sample descriptions were:

Sex: 48 Males (81%) ; 11 Females (19%)

Age :   Mean = 24.81 years, SD = 3.54 years. Range = 19 to 34 years

Performance Criteria

The results of the five scales of the RPQ were correlated with two sales performance criteria:

Percentage of calls/leads converted to likely sales (**Gross**)

Percentage of calls/leads converted to actual sales (**Net**)

Results

The scores for the RPQ and the performance ratings were correlated using a simple Pearson's *r* correlation. These are detailed in Table 19. Correlation coefficients with statistically significant values have been indicated with an asterisk.

Table 19

VARIABLES	RPQ 1	RPQ 2	RPQ 3	RPQ 4	RPQ 5
Gross Sales	.08	.13	.34**	.12	.11
Net Sales	-.01	.08	.30*	.06	.11

Conclusions

The results in Table 19 show that there was a significant relationship between the RPQ and **both** of the performance criteria.

- High scorers on the *Structural* scale converted more calls (or leads) to likely sales and converted more calls (or leads) to actual sales. These are not subjective ratings of performance but actual sales figures.

CONCURRENT VALIDITY

The Rapid Personality Questionnaire is a normative instrument based on trait theory. We developed it to reliably measure the Five Factor model of personality - commonly called **The Big Five**. Since the other widely used occupational trait based questionnaires take significantly longer to administer and score we wanted to demonstrate the extent to which the RPQ reliably measures the same constructs (traits). We felt that this would not only demonstrate the integrity of the RPQ, it would also enable users of these other measures to rapidly integrate the RPQ into their testing procedures.

We decided to correlate RPQ scores with those of Form A of the Sixteen Personality Factor Questionnaire (16PF) and Concept 5.2 of the Occupational Personality Questionnaire (OPQ). Several independent studies took place. The first was at a major building society where a number of their managers completed the three questionnaires at the same sitting. The second was at Saville & Holdsworth Ltd (SHL) where delegates to their training courses completed the RPQ and the OPQ. The third study was at a Government Agency employing very large numbers of Claims Processing personnel.

The resulting data was separately analysed both by an independent occupational psychologist commissioned by Personality Systems Ltd and by Saville & Holdsworth Ltd.   It was then consolidated for the purpose of this report. The 16PF data was analysed in-house at The Test Agency.

THE RPQ AND THE 16PF

RPQ Scale:		Extrav.	Confid.	Structural	Tough-Mind.	Conf.
16PF Scale						
A	(Outgoing)	.2516**	.1535**	.0552	-.0571	-.0318
B	(Intelligent)	-.0662	-.0024	.0640	-.0281	.0516
C	(Emotional)	.1037*	.2902**	.1045*	-.1252*	.0524
E	(Assertive)	.5010**	.3454**	-.0356	.1518**	-.4176**
F	(Happy-go-lucky)	.4246**	.3694**	.0006	-.1040*	-.3254**
G	(Conscientious)	.0646	.0570	.3375**	-.1150*	.3412**
H	(Venturesome)	.5663**	.4796**	.0396	-.0856	-.1440**
I	(Tender-minded)	-.1848**	-.1816**	-.0944	-.1410**	-.0206
L	(Suspicious)	.1923**	.0066	-.0944	.2155**	.2532**
M	(Imaginative)	-.0610	.0397	-.0404	-.0297	-.0703
N	(Shrewd)	-.1989**	-.1386**	.0682	-.0099	.1244*
O	(Apprehensive)	-.2417**	-.3899**	-.1152*	.1351**	-.0133
Q1	(Experimenting)	.2231**	.1584**	-.0945	.1451**	-.3537**
Q2	(Self-sufficient)	-.3146**	-.2285**	-.0750	.1600**	-.0281
Q3	(Controlled)	-.0061	.1353**	.3487**	-.2182**	.3458**
Q4	(Tense)	-.0847	-.3326**	-.1658**	.2212**	-.2023**

(N = 707; p < .001: **; p < .01: *)

The following summarises which 16PF scales correlate closely with RPQ scales.

RPQ SCALE	16PF SCALE
Extraversion	Venturesome (H) Assertive (E) Happy-go-lucky (F) Self-sufficient (Q2) Outgoing (A) Apprehensive (O) Experimenting (Q1) Shrewd (N) Suspicious (L) Tender-Minded (I) Emotional (C)
Confidence	Venturesome (H) Apprehensive (O) Happy-go-lucky (F) Assertive (E) Tense (Q4) Emotional (C) Self-sufficient (Q2) Tender-Minded (I) Experimenting (Q1) Outgoing (A) Shrewd (N) Controlled (Q3)
Structural	Controlled (Q3) Conscientious (G) Tense (Q4) Apprehensive (O) Emotional (C)
Tough-Mindedness	Tense (Q4) Controlled (Q3) Suspicious (L) Self-sufficient (Q2) Assertive (E) Experimenting (Q1) Tender-Minded (I) Apprehensive (O) Emotional (C) Conscientious (G) Happy-go-lucky (F)
Conformity	Assertive (E) Experimenting (Q1) Controlled (Q3) Conscientious (G) Happy-go-lucky (F) Suspicious (L) Tense (Q4) Venturesome (H) Shrewd (N)

THE RPQ AND THE OPQ

RPQ Scale:		Extrav.	Confid.	Structural	Tough-Mind.	Conf.
OPQ Scale						
R1	(Persuasive)	.51**	.46**	.06	.17	-.30**
R2	(Controlling)	.51**	.42**	.19	.15	-.17
R3	(Independent)	.53**	.31**	-.17	.43**	-.43**
R4	(Outgoing)	.69**	.46**	-.04	.18	-.45**
R5	(Affiliative)	.25*	.19	.05	-.15	-.13
R6	(Socially Confident)	.51**	.50**	.06	-.03	-.22*
R7	(Modest)	-.48**	-.34**	.17	-.25*	.33**
R8	(Democratic)	-.25*	-.11	.23*	-.35**	.23*
R9	(Caring)	-.22*	-.20	.18	-.49**	.19
T1	(Practical)	.02	.06	.07	-.08	-.02
T2	(Data Rational)	.04	-.06	.08	.04	.05
T3	(Artistic)	-.06	-.14	-.04	-.17	-.14
T4	(Behavioural)	.15	-.08	-.04	.02	-.10
T5	(Traditional)	-.45**	-.30**	.33**	-.27**	.46**
T6	(Change Orientated)	.32**	.37**	-.12	.19	-.28**
T7	(Conceptual)	.06	-.09	-.16	.11	-.17
T8	(Innovative)	.43**	.36**	-.09	.22*	-.45**
T9	(Forward Planning)	.27**	.20*	.25*	.18	-.12
T10	(Detail Conscious)	-.02	-.01	.74**	-.31**	.28**
T11	(Conscientious)	.15	.03	.57**	-.17	.08
F1	(Relaxed)	.17	.58**	.09	-.11	-.07
F2	(Worrying)	-.25*	-.48**	.05	-.07	.17
F3	(Tough Minded)	.28**	.51**	-.01	.10	-.12
F4	(Emotional Control)	-.36**	-.08	-.01	-.12	.14
F5	(Optimistic)	.31**	.44**	-.04	-.02	-.18
F6	(Critical)	.33**	.23*	-.08	.37**	-.27**
F7	(Active)	.24*	.18	.11	.06	-.13
F8	(Competitive)	.49**	.25*	-.14	.39	-.39**
F9	(Achieving)	.43**	.20*	-.03	.32	-.37*
F10	(Decisive)	.47**	.23*	-.26*	.33	-.38**
D1	(Social Desirability)	.21*	-.13	-.11	-.10	-.03

(N = 141 < .001: **; p < .01: *)

RPQ Scale:		Extrav.	Confid.	Structural	Tough-Mind.	Conf.
Team Types						
TT1	(Co-ordinator)	.4483*	.4283*	.0815	-.0347	-.2267
TT2	(Shaper)	.6273**	.3152	-.3223	.6023**	-.4846**
TT3	(Plant)	.6206**	.3779*	-.5054**	.5363**	-.5215**
TT4	(Monitor-Evaluator)	.0089	-.1583	.2834	-.0746	.0515
TT5	(Resource Inv.)	.5825**	.6017**	-.1737	.1812	-.5049**
TT6	(Completer)	-.2705	-.4723**	.7413**	-.5807**	.3744*
TT7	(Team Worker)	-.4904**	-.4622**	.4493*	-.6612**	.4706**
TT8	(Implementer)	.1355	.1220	.5429**	-.4050*	.0227
Leadership Styles						
LS1	(Directive Leader)	.5748**	.4052*	-.0529	.3068	-.3867*
LS2	(Delegative Leader)	.1513	.3707*	-.5275**	.4574**	-.3279
LS3	(Participative Leader)	.1938	.1579	.1415	-.2420	-.1262
LS4	(Consult. Leader)	.1649	-.0585	.2477	-.1547	-.0407
LS5	(Negotiative Leader)	.4365*	.4477*	-.4081*	.3465	-.4190*
SS1	(Receptive Sub.)	-.6147**	-.5998**	.5880**	-.6587**	.5618**
SS2	(Self-Reliant Sub.)	.6141**	.4709**	-.2006	.3299	-.4280*
SS3	(Collaborative Sub.)	.6104**	.6295**	-.3100	.2870	-.5519**
SS4	(Informative Sub.)	.4224*	.2357	.0172	.0406	-.3356
SS5	(Reciprocating Sub.)	.5824**	.6313**	-.3041	.4160*	-.4868**
AD	(Adaptability)	.5519**	.3373	-.2350	.2771	-.3657*
Selling Styles						
SO1	(Product)	.5647**	.3519*	.0326	.0781	-.3254
SO2	(People)	.4910**	.3900*	-.1359	.0981	-.4190*
SO3	(Adaptability)	-.2562	.4531*	.3235	-.3263	-.3420
BS1	(Confident Comm.)	.6089**	.6550**	-.2611	.2513	-.5112**
BS2	(Rapport Creator)	-.0040	-.0564	.3002	-.3932*	.1334
BS3	(Culture Fitter)	-.2266	-.4065*	.2067	-.2500	.1802
BS4	(Culture Breaker)	.6913**	.5448**	-.4308*	.4753**	-.5823**
BS5	(Enthusiast)	.5791**	.5819**	-.1566	.2548	-.5010**
BS6	(Perseverer)	.4550**	.4168*	.1927	-.0366	-.3343
BS7	(Business Winner)	.6178**	.5682**	-.3313	.5125**	-.5085**
BS8	(Technician)	.4478*	.2658	.0389	.1003	-.2196
BS9	(Admin Supporter)	-.0283	-.1767	.6661**	-.4964**	.1889
BS10	(Team Manager)	.2998	.0643	.2472	-.1144	-.0022
ST1	(Relationships Base)	.2133	.1194	.1118	-.1865	-.1116
ST2	(Energy Base)	.5913**	.5641**	-.1682	.3166	-.4873**
ST3	(Thinking Base)	.2458	.1058	.0350	-.0148	-.1512
SG1	(Gen. Sales Person)	.3273	.3012	.0750	.0435	-.2126

(N = 141; p < .001: **; p < .01: *)

The following summarises which OPQ scales correlate closely with RPQ scales.

RPQ SCALE	OPQ SCALE
Extraversion	Persuasive (R1) Controlling (R2) Independent (R3) Outgoing (R4) Confident (R6) Modest (R7) Traditional (T5) Change Orientated (T6) Innovative (T8) Emotional Control (F4) Optimistic (F5) Critical (F6) Competitive (F8) Achieving (F9) Decisive (F10)
Confidence	Persuasive (R1) Controlling (R2) Independent (R3) Outgoing (R4) Socially Confident (R6) Modest (R7) Traditional (T5) Change Orientated (T6) Innovative (T8) Relaxed (F1) Worrying (F2) Tough Minded (F3) Optimistic (F5)
Structural	Traditional (T5) Detail Conscious (T10) Conscientious (T11)
Tough-Mindedness	Independent (R3) Democratic (R8) Caring (R9) Detail Conscious (T10) Critical (F6)
Conformity	Persuasive (R1) Independent (R3) Outgoing (R4) Modest (R7) Traditional (T5) Innovative (T8) Competitive (F8) Achieving (F9) Decisive (F10)

The 16PF and the OPQ are the most established and validated normative occupational personality questionnaires used in the UK. Although the reliabilities of some of the 16PF scales are lower than would normally be considered acceptable for a new measure, these two questionnaires are viewed as benchmarks against which new tests are judged.

Despite the RPQ being administered and scored in under fifteen minutes, the above data clearly demonstrates that the RPQ is a valid psychometric questionnaire which reliably measures the personality traits that we set out to and which are considered important in an occupational environment.