

B5PQ

big five personality questionnaire

> **B5PQ User Manual**

Talent Assessment

Copyright © 2011, MySkillsProfile.com Limited.
www.myskillsprofile.com.com.

B5PQ is a trademark of MySkillsProfile.com Limited.

All rights reserved. No part of this publication may be reproduced or distributed in any form or by any means or stored in a database or retrieval system without the prior written permission of MySkillsProfile.com Limited.

Contents

1.	INTRODUCTION	3
1.1	B5PQ questionnaire	3
1.2	Applications	3
1.3	Access	3
1.4	Development	3
1.5	Psychometric criteria	4
2.	ADMINISTRATION	6
2.1	Administered by professional	6
2.2	Direct access	6
2.3	Scoring and norming	6
2.4	Good practice	6
3.	SCALE DESCRIPTIONS	7
3.1	Overview	7
3.2	Interpreting scores	7
4.	NORMS	30
4.1	Overview of norms	30
4.2	Age	30
4.3	Country of origin	30
4.4	Ethnic origin	31
4.5	Industry sectors	31
4.6	Norms table	31
5.	RELIABILITY AND VALIDITY	34
5.1	Reliability	34
5.2	Internal consistency	34
5.3	Retest stability	35
5.4	Scale intercorrelations	35
5.5	Standard Error of Difference	38
5.6	Factor analysis	40
5.7	Relationship to other measures	40
5.8	Criterion-related validity	43
6.	GROUP DIFFERENCES	45
6.1	Gender and age	45
7.	REFERENCES	49

1. Introduction

This user manual describes the administration, interpretation and technical properties of the B5PQ. It is available as a soft copy download only from **myskillsprofile.com**.

1.1 B5PQ questionnaire

The B5PQ measures 20 personality dimensions (Table 1) covering the Big Five personality factors. It is an occupational questionnaire designed for use in the selection and development of people at work and is only available for administration over the Internet. Figure 1 illustrates the B5PQ five factor model.

Figure 1. B5PQ five factor model



1.2 Applications

The questionnaire is suitable for the full range of applications for which personality questionnaires are used in employment applications, for example, selection, training and development, team building, counseling, organizational change and research.

1.3 Access

The B5PQ is designed to be used by psychologists, coaches and other HR professionals but can also be purchased direct by individual managers and professionals from the website **myskillsprofile.com**.

1.4 Development

The purpose of the instrument was to provide an assessment at the level of the Big Five factors and a more detailed picture based on individual personality traits. The 20 trait scales emerged from an analysis of the personality literature on the composition of the Big Five factors. The selection of scales for the Openness to Change factor was also influenced by Kirton's research on creativity and problem solving style (Kirton, 2002). Twenty scales were chosen because the objective was to design an instrument that could be completed fairly quickly but would also give good coverage of key facets of each of the Big Five factors.

1.5 Psychometric criteria

The B5PQ was designed to meet the key criteria in the EFPA Review Model for the Description and Evaluation of Psychological Tests (Bartram, 2002). The EFPA Review Model was produced to support and encourage the process of harmonizing the reviewing of tests. It provides a standard set of criteria to assess the quality of modern psychometric tests. These cover the common areas of test review such as norms, reliability, and validity. It is planned to submit the instrument to the British Psychological Society Psychological Testing Centre (PTC) and the Buros Institute of Mental Measurements for registration and review.

Table 1. B5PQ personality dimensions

Scale	High score meaning
Friendly	Gets to know people quickly, cheers people up, enjoys contact
Outgoing	Likes to be surrounded by people, talks a lot, enjoys social occasions
Assertive	Communicates views and ideas, seeks to influence people
Energetic	Keeps busy, reacts quickly, is always on the go, fills spare time
Trusting	Believes that people have good intentions, trusts people to be honest
Straightforward	Behaves straightforwardly, does not manipulate or use people
Considerate	Shows concern, listens well, makes people feel welcome
Modest	Keeps quiet about successes and achievements, avoids talking about self
Imaginative	Has strong imagination, sets aside time for thinking, enjoys daydreaming
Innovative	Generates original solutions to problems, has lots of ideas for change
Rule-Breaking	Prepared to bend the rules and take risks to achieve change
Adaptable	Tries new ways of working, adapts quickly to change, prefers variety
Competent	Completes tasks, excels at work, gets things done efficiently
Organized	Likes to be organized, keeps things tidy, does things according to a plan
Achieving	Works hard, sets high standards, does more than is expected of him or her
Proactive	Gets down to work quickly, initiates activities, prepares in advance
Relaxed	Has fewer worries than most people, finds it easy to unwind
Contented	Comfortable with self, happy with life, positive about future
Self-Assured	Confident in unfamiliar surroundings and with new people
Resilient	Calm under pressure, copes with problems, overcomes setbacks quickly
Impression Management	Manages self-presentation to convey positive impact

2. Administration

The B5PQ can only be administered online via the Internet. There are two ways that people can be tested.

2.1 Administered by professional

Where the test is being administered to a group of people by a psychologist or coach, the test taker receives an email from the test administrator containing a hyperlink which takes the test taker to a testing screen with instructions on how to complete the test. The test taker then goes through a series of screens with the questions and completes a personal details form.

Once the assessment test has been completed, the client may view or download the computer-generated feedback report if the online testing service has been set up to provide feedback reports to test takers. The online testing system can be set up by a test administrator to have feedback reports emailed to the test administrator, or to the test taker, or to the test taker and to the test administrator.

2.2 Direct access

Individuals can also purchase a B5PQ assessment direct from **myskillsprofile.com**. In this instance, the test taker is presented with instructions, does the test and then completes a personal details form. The individual then pays for the assessment by credit card and once the transaction has been processed, the test taker can view and download the feedback report in PDF format. Test takers can also request a copy of their feedback report to be emailed to them.

2.3 Scoring and norming

The scoring and generation of feedback reports are done online. A person's B5PQ raw scores are compared to a very large international comparison group of 25,000 people who have completed the questionnaire. Details of this norm group are given in Chapter 6.

2.4 Good practice

Occupational test users must be aware of the implications of employment law for psychometric test use. Test users have an ethical responsibility for the welfare of test takers. When people feel they have been treated fairly, they will leave the test session with a good impression of testing and the testing organization. Fair testing also has an important technical impact. If performance on the test is influenced by anything other than the attribute being measured, the accuracy and relevance of the results will be reduced.

3. Scale Descriptions

3.1 Overview

This chapter presents information on each of the B5PQ scales. For each scale, information is presented about how to interpret high, medium and low scores. This includes brief descriptions of the meaning of scale scores, examples of questionnaire items, a fuller description of key competencies and behaviors associated with high and low scores, and an indication of the relationship between the scales and other scales in the questionnaire.

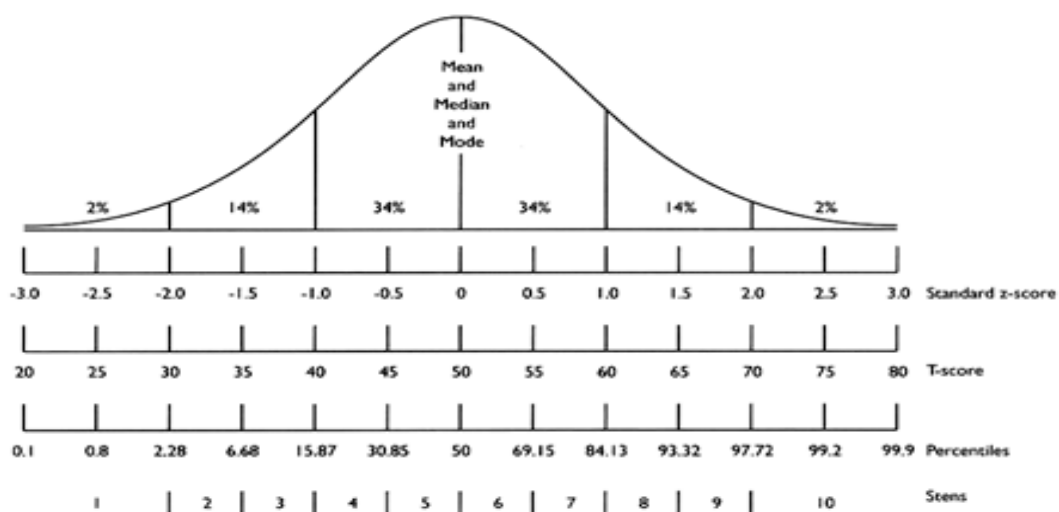
In the profile sheet and computer-generated report, test takers' scores are reported on the Sten (standard ten) scale that provides a scale of 10 points. Figure 2 shows how the Sten scale and other commonly used scales map onto the normal distribution curve. The B5PQ provides two levels of interpretation: factor scores refer to broad domains which are multi-faceted and trait scores refer to more narrowly focused behaviors which are facets of the broad domains.

3.2 Interpreting scores

The scales measure personality traits that are normally distributed within the general population. Normalized Sten scores are used as the standard scale. The average range on a Sten scale is from 4 to 7 and 68% of people score in this range. Scores outside the average range are indicative of aspects of style where the respondent is likely to be different from most people. Whether these points of difference are an asset or a liability will depend on the situation within which the person is operating.

It is important to note that the scales are a measure of normal personality and not intended for the diagnosis of clinical problems. A person may score at one of the extreme ends of a number of scales and will still be normally adjusted (although some extreme scores may suggest characteristics that are less comfortable for the person or those around them).

Figure 2. Sten scale and its relationship with the normal distribution curves and other scales



When interpreting factor scores, especially middle range ones, it is important to look at the pattern of trait scale scores. It is unwise to assume that a middle range factor score implies that the candidate also has middle range scores on each of the scales that make up the factor. Similarly, two people may score equally high on a factor, for example, Extraversion and yet be different in the behavioral expression of their high Extraversion. The expression of the underlying factor is described by the scores on the individual scales that relate to it.

Scale	Page
Friendly	9
Gregarious	10
Assertive	11
Energetic	12
Trusting	13
Straightforward	14
Considerate	15
Modest	16
Imaginative	17
Innovative	18
Rule-Breaking	19
Adaptable	20
Competent	21
Organized	22
Achieving	23
Proactive	24
Relaxed	25
Contented	26
Self-Assured	27
Resilient	28

Friendly

LOW SCORERS

Description

More formal, reserved and distant but not necessarily lacking in compassion.

Typical Item

I have been hard to get to know.

Key Behaviors

Can work on their own, do not need to be with people all the time, keep people at a distance, but not necessarily unfriendly.

HIGH SCORERS

Description

Warm, affectionate and friendly.

Typical Item

I have made friends easily.

Key Behaviors

Easily form friendships and attachments to others, like to be with people. They get to know people quickly and cheer people up.

MODERATE SCORERS

As friendly as the average person.

Moderately warm and friendly.

Friendly in some occasions but more formal in others.

RELATIONSHIP WITH OTHER SCALES

POSITIVE

Self-Assured
Gregarious
Considerate

NEGATIVE

Modest

Outgoing

LOW SCORERS		HIGH SCORERS	
Description		Description	
Quiet and reserved, do not need social stimulation.		Talkative, lively and animated.	
Typical Item		Typical Item	
I have been a quiet person.		I have liked to have people around me.	
Key Behaviors		Key Behaviors	
Prefer to do things alone, avoid crowded events, are quiet in groups, stay in the background on social occasions.		Like to have people around them, talk a lot, enjoy social occasions, like to enjoy themselves.	
MODERATE SCORERS			
As lively and animated as the average person.			
Lively and animated in some situations but not others.			
Moderately gregarious and outgoing.			
RELATIONSHIP WITH OTHER SCALES	Positive	Negative	
Strongest correlations	Friendly Self-Assured Assertive	Modest	

Assertive

LOW SCORERS

Description

Let others do the talking, prefer to keep in the background.

Typical Item

I have kept my opinions to myself.

Key Behaviors

Prefer to remain quiet and avoid drawing attention to themselves. They keep their opinions to themselves and wait for others to lead the way.

HIGH SCORERS

Description

Speak confidently and clearly to individuals and groups, are often chosen to be group leaders.

Typical Item

I have communicated my ideas clearly.

Key Behaviors

Put their views across directly, tell people if they think they are wrong, argue their views in the face of opposition. They influence people and take charge when the opportunity arises.

MODERATE SCORERS

Maintain a balance between directness and tact.

Express views and concerns in some situations but not others.

Communicate their views as well as the average person.

RELATIONSHIP WITH OTHER SCALES

POSITIVE

Self-Assured
Innovative
Friendly

NEGATIVE

Modest

Strongest correlations

Energetic

LOW SCORERS

Description

Do things at a steady pace, like to take things easy.

Typical Item

I have liked to take my time.

Key Behaviors

More leisurely and relaxed but not necessarily lazy. Likely to leave others to get things started and initiate changes and improvements.

HIGH SCORERS

Description

Thrive on activity, like to be kept busy, enjoy having a lot to do.

Typical Item

I have been on the go.

Key Behaviors

Display a sense of urgency and self-confidence. Willing to take on extra work and put in extra hours to get things done. Likely to initiate changes and improvements. Lead busy and active lives.

MODERATE SCORERS

Like to be kept moderately busy and active.

Balance periods of intense activity with periods of relaxation.

As active and vigorous as the average person.

RELATIONSHIP WITH OTHER SCALES

POSITIVE

Proactive
Achieving
Competent

NEGATIVE

Modest

Trusting

LOW SCORERS

Description

Are skeptical of others' intentions, find it difficult to trust people.

Typical Item

I have been wary of other people.

Key Behaviors

Tend to be cynical and skeptical of other people's intentions. Less likely to be sensitive to other people's views and feelings. More likely to ignore people's views and feelings and worry about their motives.

HIGH SCORERS

Description

Believe that people are honest and well-intentioned.

Typical Item

I have believed that people have good intentions.

Key Behaviors

Like to look for the best in people and tend to be considerate towards others. May be taken in and used or manipulated by other people. May be perceived as naïve.

MODERATE SCORERS

Judge others are honesty and trustworthiness on the evidence.

Balance trust and skepticism according to the situation.

As likely to believe what others say as the average person.

RELATIONSHIP WITH OTHER SCALES

POSITIVE

NEGATIVE

Strongest correlations

Contented
Friendly
Considerate

Straightforward

LOW SCORERS

Description

Prepared to flatter and manipulate people to achieve their objectives.

Typical Item

I have used people for my own ends.

Key Behaviors

Regard flattery and manipulation as necessary social skills. Tend to see straightforward people as naïve. Low scorers tend to more prepared to bend the rules but they are not necessarily dishonest.

HIGH SCORERS

Description

Are frank, sincere and trusting.

Typical Item

I have been straightforward with people.

Key Behaviors

Deals with people in a plain straightforward manner. Tend to be considerate towards others and try not to take advantage of people. Likely to stick to rules and procedures.

MODERATE SCORERS

Deal with people in a straightforward fashion so long as they trust people.

Generally straightforward but prepared to use flattery to achieve specific objectives.

As candid and sincere as the average person.

RELATIONSHIP WITH OTHER SCALES

POSITIVE

NEGATIVE

Strongest correlations

Considerate
Trusting
Proactive

Rule-Breaking

Considerate

LOW SCORERS		HIGH SCORERS	
Description		Description	
Prefer to act and take decisions on their own.		Take account of other people's ideas, views, concerns and feelings.	
Typical Item		Typical Item	
I have had little time for other people.		I have been concerned about others.	
Key Behaviors		Key Behaviors	
Operate better independently. They find it hard to make the time to listen to what other people have to say. They may not get others' commitment because of their failure to consult and involve people. They are more likely to flatter people and manipulate situations to get their way.		Make time for people, listen carefully to their views, take account of their feelings and emotions. They involve people in decisions and make people feel welcome. Their natural style is to deal with people in an open and straightforward fashion.	
MODERATE SCORERS			
Vary their personal style according to the situation.			
Are as considerate to others as the average person.			
Are moderately sensitive to others' views and feelings.			
RELATIONSHIP WITH OTHER SCALES	POSITIVE	NEGATIVE	
Strongest correlations	Friendly Trusting Straightforward	Rule-Breaking	

Modest

LOW SCORERS

Description

Tell people about themselves, their achievements and goals.

Typical Item

I have talked about myself.

Key Behaviors

Assertive and self-confident, they talk openly about their aspirations and successes. They may be seen as somewhat arrogant and self-centered.

HIGH SCORERS

Description

Are self-effacing and unassuming and keep quiet about their aspirations and achievements.

Typical Item

I have kept quiet about my achievements.

Key Behaviors

Believe that it is better to be reticent about their goals, successes and aspirations. This may stem from lack of self-confidence. Consequently, they may need training and support to develop assertiveness.

MODERATE SCORERS

Modest in some situations but not others.

Display as much modesty as the next person.

Come across as reasonably modest and unassuming.

RELATIONSHIP WITH OTHER SCALES

POSITIVE

Strongest correlations

Straightforward

NEGATIVE

Innovative
Self-Assured
Assertive

Imaginative

LOW SCORERS

Description

Focus on developing practical solutions to problems.

Typical Item

I have prevented myself getting lost in thought.

Key Behaviors

Adopt a down-to-earth approach to innovation. They stick to rules and procedures and focus on identifying practical solutions to problems.

HIGH SCORERS

Description

Like to use their imagination and get lost in thought.

Typical Item

I have had a vivid imagination.

Key Behaviors

Like to spend time thinking about things and imagining/visualizing different possibilities. They use daydreaming as a way of developing an interesting inner world.

MODERATE SCORERS

Produce practical or imaginative ideas according to the needs of the situation.

Use their imagination as much as the average person.

Get lost in thought as much as the average person.

RELATIONSHIP WITH OTHER SCALES

POSITIVE

Rule-Breaking
Innovative
Adaptable

NEGATIVE

Contented
Proactive
Organized

Strongest correlations

Innovative

LOW SCORERS

Description

Produce a few practical ideas for doing things better.

Typical Item

I have found it hard to see how to improve things.

Key Behaviors

'Adaptors' present themselves as pragmatists who identify a few ideas for improving things within generally accepted constraints. They tend to implement rather than initiate change.

HIGH SCORERS

Description

Produce lots of novel ideas for doing things differently.

Typical Item

I have produced original ideas.

Key Behaviors

'Innovators' present themselves as creative and inventive people and bring new perspectives to problems. They like to generate novel ideas about how to do things differently. Innovators are self-confident people with achievement drive who make things happen.

MODERATE SCORERS

As creative and inventive as the next person.

Innovative in some circumstances and adaptive in others.

Feel moderately creative and innovative.

RELATIONSHIP WITH OTHER SCALES

POSITIVE

Adaptable
Assertive
Competent

NEGATIVE

Modest

Strongest correlations

Rule-breaking

LOW SCORERS		HIGH SCORERS	
Description		Description	
Follow instructions and reduce risks.		Prepared to break rules and take risks in order to achieve change.	
Typical Item		Typical Item	
I have respected custom and tradition.		I have bent rules and regulations.	
Key Behaviors		Key Behaviors	
Feel bound to stick to company rules and procedures. Are unlikely to initiate significant changes or take risks. May be seen as inflexible and obstructive by people who can see ways of doing things completely differently.		Recognize that it is often necessary to break rules and take risks in order to change things. Rule-breakers tend to be innovators who assert their views and opinions and are prepared to challenge the system to make things better.	
MODERATE SCORERS			
Are willing to bend the rules in some situations but not others.			
Follow the rules as much as the average person.			
Are willing to break rules from time to time.			
RELATIONSHIP WITH OTHER SCALES	POSITIVE	NEGATIVE	
Strongest correlations	Innovative Imaginative Assertive	Modest Straightforward Organized	

Adaptable

LOW SCORERS

Description

Prefer continuity and take time to adapt to change.

Typical Item

I have preferred to stick with things that I know.

Key Behaviors

Are creatures of habit attached to routine and conventions. They behave consistently and find it hard to change their behavior to suit new circumstances and situations.

HIGH SCORERS

Description

Adapt quickly to new circumstances and people.

Typical Item

I have adapted quickly to change.

Key Behaviors

Prefer variety to routine, are quick to try new ways of working. They are resilient and self-confident people who enjoy variety in their lives and see change as an opportunity.

MODERATE SCORERS

Adapt quickly to change they have been consulted about but slower to imposed changes.

Adapt to change as quickly as the average person.

Are moderately adaptable and flexible.

RELATIONSHIP WITH OTHER SCALES

POSITIVE

Innovative
Self-Assured
Resilient

NEGATIVE

Modest

Strongest correlations

Competent

LOW SCORERS

Description

Perform poorly and leave things unfinished.

Typical Item

I have gone into situations without being prepared.

Key Behaviors

Go into situations without being prepared and consequently misjudge situations. They lack motivation and do not do things very well and tend to leave things unfinished. Low scorers often suffer from low self-esteem.

HIGH SCORERS

Description

Get things done and complete tasks successfully.

Typical Item

I have known how to get things done.

Key Behaviors

Show drive and determination and generally excel at what they do. They prepare in advance and think about the consequences of different courses of action. They display resilience and self-confidence.

MODERATE SCORERS

Perform competently when they are motivated and interested.

Perform as competently as the next person.

Come across as reasonably competent.

RELATIONSHIP WITH OTHER SCALES

POSITIVE

Achieving
Proactive
Resilient

NEGATIVE

Imaginative
Modest

Strongest correlations

Organized

LOW SCORERS		HIGH SCORERS	
Description		Description	
Are disorganized and leave things unfinished.		Are methodical and systematic and like to get the detail right.	
Typical Item		Typical Item	
I have left things in a mess.		I have wanted things to be tidy.	
Key Behaviors		Key Behaviors	
Do things as they go along rather than plan in advance. They are more disorganized in their work and personal lives. They leave others to look after the detail and tidy up behind them.		Organize their work and personal lives, develop plans, and check things to ensure everything is right. They have high standards which others may find difficult to achieve.	
MODERATE SCORERS			
Are organized and methodical when it suits them.			
Show as much concern over the detail as the next person.			
Are moderately tidy and organized.			
RELATIONSHIP WITH OTHER SCALES	POSITIVE	NEGATIVE	
Strongest correlations	Proactive Competent Achieving	Imaginative Rule-Breaking	

Achieving

LOW SCORERS

Description

Lack ambition and put less effort into their work.

Typical Item

I have lacked the will to succeed.

Key Behaviors

Have lower aspirations and do not feel that getting on at work is the most important thing. They may also lack a sense of direction in their lives and have lower self-esteem. They are likely to be perceived as lazy by high-achieving colleagues.

HIGH SCORERS

Description

Have a clear sense of direction and work hard to achieve their goals.

Typical Item

I have done more than what's expected of me.

Key Behaviors

Have high standards, set themselves challenges, display enthusiasm and put in an extra effort. They are purposeful, competent and resilient and often initiate changes and improvements. Very high scorers may find it hard to achieve a work/life balance.

MODERATE SCORERS

Focus on achieving a balance between work and leisure.

Display achievement drive when it is something they want.

Are moderately ambitious and achieving.

RELATIONSHIP WITH OTHER SCALES

POSITIVE

Competent
Proactive
Energetic

NEGATIVE

Modest

Strongest correlations

Proactive

LOW SCORERS

Description

Tend to procrastinate and need a push to get started.

Typical Item

I have postponed decisions.

Key Behaviors

Tend to put things off and postpone making decisions. They lack purpose and direction and find it hard to get down to work. They need to be pushed to complete things.

HIGH SCORERS

Description

Get down to work quickly and initiate changes.

Typical Item

I have got down to work at once.

Key Behaviors

Start tasks right away, have a sense of purpose and direction, develop and carry out plans. They like to be active and initiate changes and improvements to make things better.

MODERATE SCORERS

Display initiative in some areas but not others.

Show as much initiative as the average person.

Are reasonably proactive.

RELATIONSHIP WITH OTHER SCALES

POSITIVE

Achieving
Competent
Energetic

NEGATIVE

Modest
Imaginative

Strongest correlations

Relaxed

LOW SCORERS

Description

Are prone to worry and find it difficult to unwind.

Typical Item

I have got stressed out easily.

Key Behaviors

Feel tense and anxious, they fear the worst and get stressed out easily. They find it hard to relax and unwind. Worrying about what could go wrong and how to react may lead them to identify possible problems and solutions that a more laid-back person might miss.

HIGH SCORERS

Description

Are calm and relaxed.

Typical Item

I have been relaxed about things.

Key Behaviors

Generally feel calm and contented, they have few worries. They are calm before important occasions and handle pressure and stress. Very high scorers may be perceived by others as lacking motivation or interest.

MODERATE SCORERS

Show concern about important things but maintain the ability to relax and unwind.

Are as calm and relaxed as the average person.

Are moderately calm and relaxed.

RELATIONSHIP WITH OTHER SCALES

POSITIVE

Contented
Resilient
Self-Assured

NEGATIVE

Imaginative
Modest

Strongest correlations

Contented

LOW SCORERS		HIGH SCORERS
Description		Description
Are prone to feeling depressed and pessimistic about the future.		Feel comfortable with their lives and positive about the future.
Typical Item		Typical Item
I have felt depressed.		I have been happy with my life.
Key Behaviors		Key Behaviors
Feel depressed and are unhappy with themselves. They have frequent mood swings and tend to have a pessimistic outlook. They are prone to worry about things and lack self-confidence.		Feel comfortable with themselves and happy with their lives. They feel positive about the future and look on the bright side. They are generally relaxed, resilient and self-confident.
MODERATE SCORERS		
Are as comfortable with themselves as the average person.		
Feel depressed/low as often as the next person.		
Are fairly content with their lives.		
RELATIONSHIP WITH OTHER SCALES	POSITIVE	NEGATIVE
Strongest correlations	Relaxed Resilient Self-Assured	Imaginative Modest

Self-Assured

LOW SCORERS		HIGH SCORERS	
Description		Description	
Are shy and suffer social anxiety.		Handle new people and new situations with confidence.	
Typical Item		Typical Item	
I have been afraid to draw attention to myself.		I have been comfortable in unfamiliar situations.	
Key Behaviors		Key Behaviors	
Feel awkward and self-conscious. They find it difficult to approach people and are afraid of drawing attention to themselves. They feel awkward meeting new people and dislike social situations.		Feel at ease meeting new people and are confident of their ability to handle unfamiliar situations. They are able to stand up for themselves and are comfortable with bosses. They display resilience and are more extravert.	
MODERATE SCORERS			
Are confident in some situations but not others.			
Are as self-confident as the average person.			
Feel fairly self-confident.			
RELATIONSHIP WITH OTHER SCALES	POSITIVE	NEGATIVE	
Strongest correlations	Friendly Assertive Contented	Modest	

Resilient

LOW SCORERS		HIGH SCORERS	
Description		Description	
Feel unable to cope with stress.		Remain calm under pressure and overcome setbacks.	
Typical Item		Typical Item	
I have felt unable to deal with things.		I have remained calm under pressure.	
Key Behaviors		Key Behaviors	
Get easily stressed and feel unable to deal with things. They tend to panic in emergencies and are unable to make up their minds.		Remain calm under pressure and know how to cope when things go wrong. They control their emotions and feelings and readily overcome setbacks. They display confidence and competence.	
MODERATE SCORERS			
Usually handle stressful situations but occasionally get panicked.			
Handle pressure and stress as well as the next person.			
Are moderately resilient.			
RELATIONSHIP WITH OTHER SCALES	POSITIVE	NEGATIVE	
Strongest correlations	Relaxed Contented Competent	Modest Imaginative	

Impression Management

LOW SCORERS

Description

Appear more self-critical, present a less positive impression across the Big Five factors.

Typical Item

I have made sure that I did not take advantage of people.

Key Behaviors

Low impression management scores may be the result of being overly self-critical, a low need to please, low self-esteem, low conformism or a deliberate attempt to undersell personal qualities.

HIGH SCORERS

Description

Appear to be less self-critical, present a positive impression across the Big Five factors.

Typical Item

I have started tasks right away.

Key Behaviors

Higher scores are more likely to arise in situations where candidates feel under pressure to present a good impression; for example, in recruitment situations. Higher scores may be the result of lack of self-insight, a high need to please, high self-esteem, high conformism or a deliberate attempt to fake responses.

MODERATE SCORERS

Have not presented either a glowing impression or a very self-critical one.

4. Norms

4.1 Overview of norms

The comparison group was created from an international sample of over 40,000 persons who completed the online assessment at myskillsprofile.com. This incidental sample included people who had taken the test as individual customers and people who had taken the test as part of corporate selection and development initiatives.

Respondents aged under 16 or over 65 were deleted from the sample. Duplicate cases and cases with missing personal data were also identified and deleted. A data set of 25,000 cases was then created from two equally-sized gender data sets. The cases for the gender data sets were selected randomly using SPSS.

4.2 Age

The age distribution of the sample is shown in Table 2. About 40 percent of respondents were aged 16-25, about 30% were aged 26-35 and about 10% were aged 46-55. Only 2% of respondents were in the older 55+ age range. The mean age of the sample was 30.2 with a standard deviation of 10.5.

Table 2. Age and gender distribution of norm group (N=25,000)

Age Band	Male	Female	Total
16-25	4,618	5,699	10,317
	18.47%	22.80%	41.27%
26-35	4,212	3,493	7,705
	16.85%	13.97%	30.82%
36-45	2,259	2,055	4,314
	9.04%	8.22%	17.26%
46-55	1,161	1,065	2,226
	4.64%	4.26%	8.90%
56-65	250	188	438
	1.00%	0.75%	1.75%
Total	12,500	12,500	25,000
	50.00%	50.00%	100.00%

4.3 Country of origin

We did not collect data about country of origin and ethnicity routinely. In order to provide an indication of the likely ethnic and nationality mix of the standardization group, we invited respondents to provide further information about these characteristics over a limited time period. About half of a sample of just over 3,000 respondents volunteered this information. Table 3 gives the country distribution of the sample—over 90 percent of respondents came from the United States, the United Kingdom, Canada and Australia. About half the sample was from the United States, one fifth from the United Kingdom and one tenth from Australia.

Table 3. Country of origin of respondents (N=1,519)

Country	Male	Female	Total
United States	241	506	747
	15.87%	33.31%	49.18%
United Kingdom	152	210	362
	10.01%	13.82%	23.83%
Australia	63	104	167
	4.15%	6.85%	10.99%
Canada	43	82	125
	2.83%	5.40%	8.23%
Rest of the World	59	59	118
	3.88%	3.88%	7.77%
Total	558	961	1,519
	36.73%	63.27%	100.00%

4.4 Ethnic origin

Table 4 shows the distribution by race and ethnicity. Seventy five percent described themselves as White, 4 percent said they were Asian, 8 percent reported that they were Black and 5 percent said they were Spanish/Hispanic/Latino.

Table 4. Ethnic origin of respondents (N=1,513)

Ethnic Origin	Male	Female	Total
Asian	30	33	63
	1.98%	2.18%	4.16%
Black	37	81	118
	2.45%	5.35%	7.80%
Chinese	4	4	8
	0.26%	0.26%	0.53%
Mixed	18	42	60
	1.19%	2.78%	3.97%
Other	19	28	47
	1.26%	1.85%	3.11%
Hispanic or Latino	28	48	76
	1.85%	3.17%	5.02%
White	417	724	1141
	27.56%	47.85%	75.41%
Total	553	960	1,513
	36.55%	63.45%	100.00%

4.5 Industry sectors

Table 5 shows the top twenty five sectors represented in the international comparison group. The largest group was education making up about 15 percent of the sample.

4.6 Norms table

Table 6 provides norms for the B5PQ scales using the Standard Ten (Sten) scoring approach

Table 5. Industry sectors in B5PQ general population norm sample (N=25,000)

Sector	Frequency	Percent
Education	589	14.15
Computers/software	245	5.89
Other services	233	5.60
Advertising/marketing	209	5.02
Consulting	189	4.54
Health services	176	4.23
Arts/culture	173	4.16
Computer-related services	166	3.99
Engineering	147	3.53
Government	140	3.36
Accounting	119	2.86
Sales and marketing	106	2.55
Telecommunications	93	2.23
Other non-profit	92	2.21
Other manufacturing	75	1.80
Entertainment/leisure	74	1.78
Social services	67	1.61
Retail/wholesale	62	1.49
Internet development services	55	1.32
Food/beverage	50	1.20
Medical/health care devices	49	1.18
Construction	48	1.15
Legal services	47	1.13
Real estate development	24	0.58
Advocacy	22	0.53

Table 6. B5PQ general population norms (N=25,000)

Scale	1	2	3	4	5	6	7	8	9	10	Mean	SD
Friendly	0-7	8-11	12-15	16-18	19-21	22-25	26-27	28-30	31	32	20.94	6.12
Outgoing	0-6	7-9	10-12	13-15	16-18	19-21	22-24	25-26	27-28	29-31	17.75	5.78
Assertive	0-7	8-10	11-14	15-17	18-19	20-22	23-24	25-26	27-28	29-32	18.86	5.20
Energetic	0-10	11-12	13-15	16-17	18-20	21-22	23-24	25-26	27-28	29-31	19.55	4.74
Trusting	0-7	8-11	12-15	16-18	19-21	22-23	24-25	26-28	29-30	31-32	20.08	5.57
Straightforward	0-12	13-15	16-17	18-20	21-22	23-24	25-26	27-28	29-30	31-32	21.74	4.55
Considerate	0-12	13-15	16-18	19-20	21-23	24-25	26-27	28	29-30	31-32	22.19	4.50
Unassuming	0-6	7-8	9-11	12-14	15-16	17-18	19-21	22-23	24-26	27-31	15.91	4.98
Imaginative	0-10	11-13	14-15	16-17	18-19	20-21	22-24	25-26	27-28	29-32	19.14	4.41
Innovative	0-10	11-12	13-15	16-17	18-20	21-23	24-25	26-28	29-30	31-32	20.09	5.14
Rule-Breaking	0-5	6-7	8-9	10-12	13-14	15-16	17-19	20-21	22-24	25-30	13.94	4.68
Adaptable	0-9	10-12	13-15	16-18	19-20	21-23	24-25	26-27	28-29	30-32	20.04	4.94
Competent	0-12	13-15	16-18	19-21	22-23	24-25	26-27	28-29	30	31-32	22.58	4.68
Organized	0-10	11-13	14-16	17-18	19-21	22-24	25-26	27-28	29-30	31-32	20.79	5.10
Achieving	0-10	11-14	15-17	18-21	22-24	25-27	28-29	30	31	32	23.05	5.60
Proactive	0-8	9-11	12-14	15-17	18-21	22-23	24-26	27-28	29-30	31-32	20.05	5.69
Relaxed	0-5	6-8	9-12	13-16	17-19	20-22	23-24	25-27	28-29	30-32	18.25	5.98
Contented	0-6	7-10	11-14	15-18	19-22	23-25	26-28	29-30	31	32	21.01	6.74
Self-Assured	0-6	7-10	11-13	14-17	18-20	21-23	24-25	26-28	29-30	31-32	19.40	5.94
Resilient	0-8	9-11	12-14	15-17	18-21	22-24	25-26	27-29	30-31	32	20.28	5.86
Impression Management	0-29	30-34	35-39	40-45	46-50	51-55	56-60	61-65	66-69	70-80	49.74	10.27

5. Reliability and Validity

5.1 Reliability

Test scores are reliable when they are reproducible and consistent. If a personality questionnaire gives significantly different results when it is taken on different occasions, then it is likely to be unreliable. Because of errors in measurement and human inconsistency, people are not expected to produce precisely the same results on different occasions. The statistical measure describing the relationship between the scores is called the reliability coefficient.

5.2 Internal consistency

Table 7 presents internal consistency estimates based on Cronbach's Coefficient Alpha together with raw and sten score score SEMs. The scale reliabilities range from from 0.70 to 0.86. Overall, the B5PQ has good internal consistency reliability with a median scale reliability of 0.79.

Table 7. Internal consistency reliabilities for B5PQ (N=25,000)

Scale	Alpha	Mean	SD	Raw Score SEM	Sten Score SEM
Friendly	0.84	20.94	6.12	2.45	0.82
Gregarious	0.79	17.75	5.78	2.65	0.92
Assertive	0.75	18.86	5.2	2.60	0.97
Energetic	0.71	19.55	4.74	2.55	1.06
Trusting	0.85	20.08	5.57	2.16	0.76
Straightforward	0.74	21.74	4.55	2.32	1.01
Considerate	0.79	22.19	4.5	2.06	0.91
Modest	0.71	15.91	4.98	2.68	1.03
Imaginative	0.70	19.14	4.41	2.42	1.05
Innovative	0.84	20.09	5.14	2.06	0.75
Rule-Breaking	0.71	13.94	4.68	2.52	1.02
Adaptable	0.79	20.04	4.94	2.26	0.90
Competent	0.76	22.58	4.68	2.29	0.99
Organized	0.74	20.79	5.1	2.60	0.98
Achieving	0.82	23.05	5.6	2.38	0.93
Proactive	0.81	20.05	5.69	2.48	0.88
Relaxed	0.78	18.25	5.98	2.80	0.97
Contented	0.86	21.01	6.74	2.52	0.81
Self-Assured	0.79	19.4	5.94	2.72	0.90
Resilient	0.82	20.28	5.86	2.49	0.83
Median	0.79	20.07	5.17	2.48	0.93

The B5PQ trait scale SEMs range from 2.06 to 2.80 with a median SEM of 2.48. This is equivalent to a Sten score SEM of approximately 1. This indicates that there is a 68% likelihood that the person's true score on one of the trait scales will be situated one Sten either side of the observed score.

5.3 Retest stability

Test-retest reliability measures score consistency over time. Table 8 gives information on the reliability of the B5PQ. This information is based on 56 respondents who completed the questionnaire with a month in between each administration. The reliability of all the scales is above 0.70 and comparable with the internal consistency estimates. The median test-retest reliability is 0.81 with a range of 0.73 to 0.91.

Table 8. Test-retest reliability (N=56)

Scale	Mean	SD	Mean	SD	Reliability
Friendly	5.71	1.88	6.02	1.77	0.81
Gregarious	5.55	2.22	5.54	2.17	0.87
Assertive	5.84	1.92	5.98	1.69	0.74
Energetic	5.38	2.35	5.79	2.24	0.91
Trusting	5.59	1.76	5.79	1.88	0.76
Straightforward	5.59	2.15	5.96	2.11	0.74
Considerate	5.63	2.01	5.71	1.90	0.73
Modest	5.41	1.83	5.91	1.86	0.74
Imaginative	5.52	2.05	5.29	2.40	0.73
Innovative	5.71	1.84	5.80	1.78	0.77
Rule-Breaking	5.77	1.68	5.66	1.94	0.76
Adaptable	5.80	1.84	5.82	1.95	0.83
Competent	5.80	2.05	6.02	1.98	0.87
Organized	5.91	1.85	5.95	1.78	0.81
Achieving	5.98	2.20	6.32	2.18	0.84
Proactive	5.75	2.05	6.05	2.00	0.88
Relaxed	5.45	1.65	6.04	1.85	0.79
Contented	5.59	2.15	6.02	2.00	0.87
Self-Assured	5.63	1.88	5.71	1.72	0.84
Resilient	5.50	1.95	5.73	2.00	0.82
Median	5.63	1.94	5.87	1.95	0.81

5.4 Scale intercorrelations

Table 9 shows the intercorrelations of the B5PQ scales. The correlations range from -0.53 to 0.80 with a median correlation of 0.34. Four out of ten correlations fall between -0.3 and 0.3 and three quarters fall between -0.5 and 0.5.

In order to determine how well a personality questionnaire differentiates between the different dimensions it is designed to measure, it is necessary to correct the correlations for unreliability. A correlation needs to be divided by the square root of the product of the two variables' reliability to determine what the correlation between the two variables would be if the variables' reliabilities were perfect. If two scales share less than 50% reliable variance, then we can be reasonably certain that they are independent.

Table 8 shows the percentage of common reliable variance for the B5PQ scales. Eighty four percent of the scale pairs share less than 50% common variance and 54% share less than 25% common variance.

Table 9. Intercorrelations of B5PQ scales (N=25,000)

Scale	Friendly	Gregarious	Assertive	Energetic	Trusting	Straightforward	Considerate	Modest	Imaginative	Innovative	Rule-Breaking	Adaptable	Competent	Organized	Achieving	Proactive	Relaxed	Contented	Self-Assured	Resilient
Friendly	1.00	0.74	0.56	0.43	0.52	0.21	0.59	-0.26	-0.08	0.40	-0.01	0.42	0.47	0.18	0.44	0.42	0.53	0.57	0.75	0.44
Gregarious		1.00	0.52	0.39	0.37	0.10	0.40	-0.29	-0.07	0.33	0.03	0.36	0.30	0.08	0.31	0.29	0.34	0.43	0.62	0.30
Assertive			1.00	0.51	0.26	-0.02	0.22	-0.53	0.05	0.62	0.32	0.46	0.54	0.14	0.52	0.46	0.42	0.45	0.71	0.45
Energetic				1.00	0.26	0.19	0.28	-0.19	-0.16	0.55	0.04	0.47	0.62	0.35	0.68	0.69	0.31	0.45	0.50	0.49
Trusting					1.00	0.36	0.51	-0.10	-0.07	0.28	-0.11	0.31	0.39	0.16	0.37	0.34	0.51	0.55	0.46	0.42
Straightforward						1.00	0.44	0.23	-0.13	0.11	-0.35	0.19	0.30	0.27	0.28	0.31	0.22	0.29	0.15	0.28
Considerate							1.00	0.06	-0.01	0.24	-0.21	0.28	0.41	0.21	0.40	0.34	0.32	0.37	0.38	0.28
Modest								1.00	-0.14	-0.31	-0.27	-0.20	-0.22	0.02	-0.22	-0.13	-0.20	-0.24	-0.39	-0.16
Imaginative									1.00	0.15	0.35	0.10	-0.10	-0.31	-0.08	-0.27	-0.13	-0.21	-0.08	-0.19
Innovative										1.00	0.35	0.68	0.57	0.16	0.55	0.55	0.43	0.47	0.55	0.54
Rule-Breaking											1.00	0.30	-0.04	-0.36	-0.03	-0.10	0.07	-0.07	0.15	0.04
Adaptable												1.00	0.43	0.10	0.43	0.44	0.46	0.46	0.53	0.53
Competent													1.00	0.43	0.80	0.74	0.50	0.59	0.58	0.63
Organized														1.00	0.41	0.55	0.17	0.31	0.20	0.32
Achieving															1.00	0.75	0.40	0.53	0.52	0.53
Proactive																1.00	0.46	0.59	0.53	0.62
Relaxed																	1.00	0.77	0.65	0.77
Contented																		1.00	0.66	0.76
Self-Assured																			1.00	0.62
Resilient																				1.00

Table 10. Percentage of common reliable variance for B5PQ scales (N=25,000)

Scale	Gregarious	Assertive	Energetic	Trusting	Straightforward	Considerate	Modest	Imaginative	Innovative	Rule-Breaking	Adaptable	Competent	Organized	Achieving	Proactive	Relaxed	Contented	Self-Assured	Resilient
Friendly	0.83	0.50	0.31	0.38	0.07	0.52	0.11	0.01	0.23	0.00	0.27	0.35	0.05	0.28	0.26	0.43	0.45	0.85	0.28
Gregarious		0.46	0.27	0.20	0.02	0.26	0.15	0.01	0.16	0.00	0.21	0.15	0.01	0.15	0.13	0.19	0.27	0.62	0.14
Assertive			0.49	0.11	0.00	0.08	0.53	0.00	0.61	0.19	0.36	0.51	0.04	0.44	0.35	0.30	0.31	0.85	0.33
Energetic				0.11	0.07	0.14	0.07	0.05	0.51	0.00	0.39	0.71	0.23	0.79	0.83	0.17	0.33	0.45	0.41
Trusting					0.21	0.39	0.02	0.01	0.11	0.02	0.14	0.24	0.04	0.20	0.17	0.39	0.41	0.32	0.25
Straightforward						0.33	0.10	0.03	0.02	0.23	0.06	0.16	0.13	0.13	0.16	0.08	0.13	0.04	0.13
Considerate							0.01	0.00	0.09	0.08	0.13	0.28	0.08	0.25	0.18	0.17	0.20	0.23	0.12
Modest								0.04	0.16	0.14	0.07	0.09	0.00	0.08	0.03	0.07	0.09	0.27	0.04
Imaginative									0.04	0.25	0.02	0.02	0.19	0.01	0.13	0.03	0.07	0.01	0.06
Innovative										0.21	0.70	0.51	0.04	0.44	0.44	0.28	0.31	0.46	0.42
Rule-Breaking											0.16	0.00	0.25	0.00	0.02	0.01	0.01	0.04	0.00
Adaptable												0.31	0.02	0.29	0.30	0.34	0.31	0.45	0.43
Competent													0.33	1.03	0.89	0.42	0.53	0.56	0.64
Organized														0.28	0.50	0.05	0.15	0.07	0.17
Achieving															0.85	0.25	0.40	0.42	0.42
Proactive																0.33	0.50	0.44	0.58
Relaxed																	0.88	0.69	0.93
Contented																		0.64	0.82
Self-Assured																			0.59

5.5 Standard Error of Difference

The Standard Error of Difference (SEd) helps us determine the size of the gap that you need to see between a person's scores on any two scales before you can conclude that the difference is real. The SEd depends on the reliability of the scales – the higher the reliability the smaller the SEd is. If there are two full SEds between the scores on two scales, then there is a 95% likelihood that there is a real difference.

Table 11 shows the SEds for the B5PQ scales. The SEds range from 1.07 to 1.49 with a median of 1.32. This means that you need to see a difference of 3 Stens or more before you can infer that the candidate has more of one trait than the other – for example, John has more extravert tendencies than agreeable ones.

Table 11. SED of B5PQ scales (N=25,000)

Scale	Gregarious	Assertive	Energetic	Trusting	Straightforward	Considerate	Modest	Imaginative	Innovative	Rule-Breaking	Adaptable	Competent	Organized	Achieving	Proactive	Relaxed	Contented	Self-Assured	Resilient
Friendly	1.23	1.27	1.34	1.12	1.30	1.22	1.32	1.33	1.11	1.31	1.22	1.29	1.28	1.24	1.20	1.27	1.15	1.22	1.17
Gregarious		1.34	1.40	1.19	1.37	1.29	1.38	1.40	1.19	1.37	1.29	1.35	1.34	1.31	1.27	1.34	1.23	1.29	1.24
Assertive			1.44	1.23	1.40	1.33	1.41	1.43	1.23	1.41	1.32	1.39	1.38	1.34	1.31	1.37	1.26	1.32	1.28
Energetic				1.30	1.46	1.40	1.48	1.49	1.30	1.47	1.39	1.45	1.44	1.41	1.38	1.44	1.33	1.39	1.35
Trusting					1.26	1.19	1.28	1.30	1.07	1.27	1.18	1.25	1.24	1.20	1.16	1.23	1.11	1.18	1.13
Straightforward						1.36	1.44	1.46	1.26	1.44	1.35	1.41	1.41	1.37	1.34	1.40	1.29	1.35	1.31
Considerate							1.37	1.39	1.18	1.37	1.28	1.34	1.34	1.30	1.27	1.33	1.22	1.28	1.23
Modest								1.47	1.27	1.45	1.37	1.43	1.42	1.39	1.35	1.41	1.31	1.37	1.32
Imaginative									1.29	1.46	1.38	1.44	1.44	1.40	1.37	1.43	1.33	1.38	1.34
Innovative										1.27	1.17	1.24	1.23	1.19	1.16	1.23	1.10	1.17	1.12
Rule-Breaking											1.36	1.42	1.41	1.38	1.35	1.41	1.30	1.36	1.32
Adaptable												1.34	1.33	1.29	1.26	1.32	1.21	1.27	1.22
Competent													1.39	1.36	1.32	1.39	1.28	1.34	1.29
Organized														1.35	1.32	1.38	1.27	1.33	1.28
Achieving															1.28	1.34	1.23	1.29	1.25
Proactive																1.31	1.20	1.26	1.21
Relaxed																	1.26	1.32	1.28
Contented																		1.21	1.16
Self-Assured																			1.22

5.6 Factor analysis

Principal factors extraction with varimax rotation was performed on the B5PQ scales on the standardization sample of 25,000 respondents (see Table 12). The Kaiser-Meyer-Olkin Measure of Sampling Adequacy was 0.92, well above 0.6 required for a good factor analysis. The numbers in the residual correlation matrix were all very small indicating that the analysis was good.

Five factors were extracted with eigenvalues of 1 accounting for 74% of the variance. The variables were on the whole well-defined by the factor solution. Communality values were moderate (0.58) to high (0.86). The median communality value was 0.76. With a cut-off of 0.40 for the inclusion of a scale in the interpretation of a factor, all the twenty scales loaded on at least one of the five factors.

It is clear that there are five key factors in the solution and that these factors resemble the Five factor Model but the rotation falls short of Thurstone's criterion of simple structure (Thurstone, 1947). Ten of the variables in the solution were complex loading on more than one factor—Assertive, Trusting, Considerate, Modest, Innovative, Rule-Breaking, Adaptable, Organized, Self-Assured and Resilient.

The solution has a clearly identifiable Achievement/Conscientiousness factor consisting of 9 traits: Proactive, Achieving, Energetic, Competent, Innovative, Organized, Assertive, Resilient and Adaptable. Emotional Stability has 6 elements: Relaxed, Resilient, Contented, Self-Assured, Trusting and Adaptable. Extraversion has six facets loading positively and one negatively: Gregarious Friendly, Self-Assured, Assertive, Considerate and Trusting load positively and Modest loads negatively. Agreeableness has four scales loading positively and one negatively: Straightforward, Considerate, Modest and Trusting load positively and Rule-Breaking loads negatively. Openness to change has the Imaginative, Rule-Breaking, Adaptable and Innovative scales loading positively and the Organized scale loading negatively.

The overall factor structure of the B5PQ scales is similar to the factor structure of the NEO-PI-R scales reported by Costa & McCrae (1992). There are also some similarities in the scales that load on more than one factor. For example, the NEO-PI-R Assertiveness and Activity scales load on the Conscientious factor as the B5PQ Assertive and Energetic scales do on the B5PQ Achievement and Conscientiousness factor. The B5PQ Trusting scale loads on the Emotional Stability factor and the NEO-PI-R Trust scale does on the NEO Neuroticism factor. The B5PQ Considerate scale loads on Agreeableness and Extraversion as does the NEO-PI-R Altruism scale.

5.7 Relationship to other measures

In order to assess whether the B5PQ measures the Big-Five, we included marker variables in the test development questionnaire. These markers were taken from the International Personality Item Pool (2001) scales developed to measure constructs similar to those in the NEO-PI-R (Goldberg, 1999). Table 13 shows the relationships between these marker variables and the B5PQ scales. The correlations between the B5PQ scales and the marker variables are in the range of 0.74 to 0.86 with a median correlation of 0.80 suggesting that the B5PQ trait scales are measuring similar constructs to the NEO-PI-R facet scales.

Table 12. Rotated matrix for B5PQ scales (N=25,000)

Scale	Achievement and Conscientiousness	Emotional Stability	Extraversion	Agreeableness	Openness to Change	h ²
Friendly	0.22	0.31	0.82	0.19	0.00	0.85
Gregarious	0.14	0.14	0.85	0.03	-0.01	0.76
Assertive	0.50	0.24	0.57	-0.30	0.24	0.77
Energetic	0.78	0.13	0.26	0.01	0.01	0.70
Trusting	0.09	0.47	0.42	0.46	0.01	0.61
Straightforward	0.22	0.18	-0.01	0.75	-0.10	0.65
Considerate	0.22	0.09	0.50	0.67	0.04	0.76
Modest	-0.18	-0.09	-0.47	0.55	-0.16	0.58
Imaginative	-0.10	-0.23	0.01	0.07	0.78	0.67
Innovative	0.61	0.36	0.19	-0.06	0.47	0.77
Rule-Breaking	-0.01	0.13	0.00	-0.45	0.71	0.72
Adaptable	0.43	0.45	0.18	0.09	0.47	0.65
Competent	0.77	0.32	0.22	0.14	0.00	0.76
Organized	0.60	0.05	-0.03	0.15	-0.49	0.63
Achieving	0.82	0.19	0.22	0.15	0.03	0.79
Proactive	0.82	0.33	0.13	0.11	-0.16	0.83
Relaxed	0.17	0.87	0.25	0.07	0.00	0.86
Contented	0.33	0.76	0.32	0.11	-0.12	0.82
Self-Assured	0.37	0.51	0.64	-0.06	0.07	0.81
Resilient	0.44	0.80	0.10	0.06	-0.02	0.84
Percent of variance	41.30	12.69	8.16	6.16	5.84	
Percent of covariance	55.70	17.11	11.00	8.31	7.88	

Main factor loadings above 0.40 are in bold.

It was not possible to include marker variables for the Innovative and Rule-Breaking scales because there are no obvious corresponding scales in the NEO-PI-R. These two scales correlate strongly with scales in the KAI (Kirton, 1994). The Kirton Adaptation-Innovation Inventory (KAI) is a 32 item questionnaire which provides a measure of creative style (Kirton, 1977). The KAI places people on a single global dimension where one end of the dimension represents ‘innovators’ and the other end represents ‘adaptors’. The KAI has 3 subscales: Originality, Efficiency and Conformity. A cut-down version of the B5PQ which included the items from the Innovative and Rule-Breaking scales was administered to a sample of 126 managers and professionals spanning 28 nationalities attending an executive program at Manchester Business School. The Innovative and Rule-Breaking scales correlated 0.67 and -0.58 with the KA Originality and Conformity Scales.

Table 13. Correlations between selected B5PQ scales and IPIP NEO-PI-R Markers (N=1,393)

Scale	E1: Friendliness	E2: Gregariousness	E3: Assertiveness	E4: Activity Level	A1: Trust	A2: Morality	A3: Altruism	A5: Modesty	O1: Imagination	O4: Adventurousness	C1: Self-efficacy	C2: Orderliness	C4: Achievement	C5: Self-Discipline	N1: Anxiety	S3: Depression	N4: Self-consciousness	N6: Vulnerability
Friendly	.84**	.52**	.41**	.25**	.40**	.10**	.22**	-.32**	.04	.28**	.29**	.05*	.27**	.30**	-.46**	-.46**	-.40**	-.33**
Gregarious	.60**	.74**	.33**	.24**	.29**	.04	.12**	-.30**	.05	.27**	.14**	-.02	.17**	.16**	-.30**	-.32**	-.32**	-.19**
Assertive	.37**	.34**	.81**	.37**	.18**	-.11**	.09**	-.50**	.09**	.38**	.32**	.06*	.37**	.32**	-.30**	-.43**	-.63**	-.33**
Energetic	.31**	.29**	.53**	.77**	.21**	.08**	.18**	-.25**	-.01	.37**	.45**	.19**	.57**	.54**	-.23**	-.39**	-.40**	-.38**
Trusting	.34**	.32**	.25**	.24**	.86**	.23**	.28**	-.23**	.05	.30**	.36**	.03	.32**	.31**	-.44**	-.42**	-.31**	-.38**
Straightforward	.09**	.11**	.01	.16**	.28**	.76**	.27**	.04	-.05	.10**	.28**	.14**	.30**	.24**	-.15**	-.23**	-.10**	-.20**
Considerate	.39**	.35**	.18**	.17**	.42**	.39**	.78**	-.06*	.11**	.18**	.33**	.16**	.35**	.29**	-.23**	-.25**	-.14**	-.26**
Modest	-.19**	-.13**	-.38**	-.19**	-.07**	.25**	.03	.80**	-.10**	-.24**	-.13**	.05	-.12**	-.12**	.19**	.31**	.38**	.17**
Imaginative	-.02	-.08**	.06*	-.07*	.05	-.03	.13**	-.12**	.79**	.22**	-.03	-.12**	.03	-.12**	.02	.06*	.03	.05
Adaptable	.26**	.24**	.44**	.34**	.29**	.07**	.17**	-.26**	.17**	.82**	.32**	.02	.32**	.33**	-.39**	-.41**	-.44**	-.46**
Competent	.26**	.22**	.54**	.46**	.29**	.22**	.25**	-.31**	.06*	.31**	.78**	.27**	.64**	.59**	-.37**	-.54**	-.49**	-.55**
Organized	.07*	.02	.18**	.21**	.10**	.19**	.12**	-.07**	-.13**	-.01	.38**	.79**	.36**	.54**	-.08**	-.22**	-.16**	-.28**
Achieving	.27**	.24**	.53**	.52**	.30**	.19**	.25**	-.28**	.05*	.32**	.57**	.28**	.84**	.59**	-.27**	-.44**	-.40**	-.44**
Proactive	.25**	.24**	.52**	.50**	.27**	.16**	.18**	-.25**	-.08**	.28**	.56**	.31**	.62**	.85**	-.34**	-.49**	-.47**	-.52**
Relaxed	.31**	.25**	.36**	.20**	.36**	.07**	.12**	-.35**	-.02	.33**	.43**	.00	.23**	.36**	-.80**	-.69**	-.59**	-.69**
Contented	.38**	.32**	.39**	.27**	.40**	.15**	.16**	-.43**	-.01	.31**	.45**	.07**	.31**	.42**	-.63**	-.87**	-.58**	-.65**
Self-Assured	.52**	.42**	.61**	.36**	.32**	.01	.14**	-.46**	-.00	.41**	.41**	.07**	.35**	.39**	-.52**	-.62**	-.76**	-.53**
Resilient	.22**	.23**	.45**	.34**	.29**	.10**	.15**	-.29**	-.011	.398**	.51**	.10**	.39**	.47**	-.56**	-.68**	-.60**	-.86**

Note. ** Correlation is significant at the 0.01 level (2-tailed).* Correlation is significant at the 0.05 level (2-tailed).

5.8 Criterion-related validity

Table 14 shows the correlations between B5PQ scale scores and job appraisal ratings. This is based on a sample of approximately 1,500 respondents who completed the B5PQ on the Internet and volunteered information about job performance ratings. Respondents were asked to report how their manager assessed their performance at their last performance appraisal using a 4-point scale (excellent, good, satisfactory, poor) and to assess their own performance. Combined ratings shown in the table are based on correlations between scale scores and the sum of the manager's assessment and the test taker's self-assessment.

The correlations between the trait scales and self-assessed job performance range from -0.14 to 0.48 with a median of 0.28. All the correlations are statistically significant and three are negative: Rule-Breaking, Modest and Imaginative. The strongest correlations exceeding 0.40 are with three scales in the Achievement and Conscientiousness factor: Competent, Proactive and Achieving. The range and pattern of correlations are very similar whether self-assessments, reported management ratings or the combined ratings are used although the correlations are slightly lower in the case of the management ratings and here one of the correlations (with the scale Modest) does not reach statistical significance.

Table 14. Correlations between B5PQ scores and job appraisal ratings

Scale	Self-Assessment (N=1.507)	Managerial Assessment (N=1.413)	Combined (n=1,407)
Friendly	0.27**	0.21**	0.26**
Gregarious	0.18**	0.15**	0.19**
Assertive	0.30**	0.22**	0.29**
Energetic	0.35**	0.30**	0.36**
Trusting	0.23**	0.18**	0.22**
Straightforward	0.17**	0.16**	0.19**
Considerate	0.19**	0.21**	0.22**
Modest	-0.12**	-0.02	-0.07*
Imaginative	-0.14**	-0.10**	-0.14**
Innovative	0.31**	0.27**	0.32**
Rule-Breaking	-0.11**	-0.12**	-0.13**
Adaptable	0.18**	0.15**	0.18**
Competent	0.48**	0.42**	0.50**
Organized	0.28**	0.24**	0.29**
Achieving	0.44**	0.39**	0.46**
Proactive	0.45**	0.36**	0.44**
Relaxed	0.28**	0.22**	0.27**
Contented	0.37**	0.27**	0.35**
Self-Assured	0.33**	0.27**	0.33**
Resilient	0.34**	0.28**	0.34**
Median	0.28**	0.22**	0.28**

Note. ** Correlation is significant at the 0.01 level (2-tailed). * Correlation is significant at the 0.05 level (2-tailed).

The range of correlations and the medians are consistent with those reported in the literature—for example, Robertson (1997) notes that even with meta-analytic corrections, the upper limits for the validity of personality variables against overall work performance variables are in the range of 0.25 to 0.4.

Regression analysis was used to help understand the contribution of the different trait scales on job appraisal ratings. A standard multiple regression was performed between managerially and self-assessed job performance combined as the dependent variable and the 20 trait scales as the independent variables. Table 15 displays R , R^2 , adjusted R^2 , the standard error of the estimate, F change and the significance of F change.

The best predictor of job performance was the competence facet accounting for 25% of the variance. Altogether, 27% of the variability in job performance ratings was accounted for by five scales: Competent, Achieving, Adaptable, Contented and Innovative.

Table 15. Regression of B5PQ scale scores on job performance ratings (N=1,405)

Predictor Scales	R	R Square	Adjusted R Square	Std. Error of the Estimate	F Change	Sig. F Change
Competent	0.50	0.25	0.25	1.16	467.07	0.00
Competent, Achieving	0.51	0.26	0.26	1.15	26.07	0.00
Competent, Achieving, Adaptable	0.52	0.27	0.26	1.15	6.39	0.01
Competent, Achieving, Adaptable, Contented	0.52	0.27	0.27	1.14	9.62	0.00
Competent, Achieving, Adaptable, Contented, Innovative	0.53	0.28	0.27	1.14	8.50	0.00

6. Group Differences

6.1 Gender and age

Table 16 shows the differences in factor scores (computed by SPSS Factor) and trait raw scores for men and women. Table 17 shows the correlations between personality and age and Figure 3 depicts the age differences across the five factors for men and women. Although the differences are often small, they do reach statistical significance due to the large sample size. Many of the differences are consistent with those reported by Srivastava *et al* (2003) where a very large sample of 132,000 respondents was used. As both gender and age differences are small relative to individual variation within genders and ages, it seems wholly appropriate to use combined gender and age norms.

Achievement and Conscientiousness

Women tended to have slightly higher scores on Achievement and Conscientiousness. Men and women increased in Achievement and Conscientiousness with age up to age 55 and the rate of increase was greater at younger ages than older ages. This is consistent with Srivastava *et al* (2003) who ascribe the more pronounced increase in the period up to age 45 to patterns of change in work and partnership.

Emotional Stability

Men tended to have slightly higher scores on emotional stability. Men and women increased in emotional stability through adulthood—women more substantially than men. This is consistent with Srivastava *et al* (2003). We also found, like Srivastava *et al*, that the early gender difference narrowed.

Extraversion

Women are more extravert than men on extraversion. Our data shows younger men and women as more extravert and extraversion decreasing until middle age and then recovering. Srivastava *et al* (2003) found that men increase slightly in extraversion with age whereas women decreased slightly.

Agreeableness

Women tended to score higher on agreeableness which increased with age in men and women but the increase fell away once men reached 50. Srivastava *et al* (2003) found that agreeableness accelerated in the late 20s and continued to increase rapidly through the 30s before slowing down in the 40s. The period of change coincides with the period when people are having families.

Openness to Change

Men have higher scores on openness. In men, openness decreased with age up to about age 40 and then increased. In women, openness initially decreased and then recovered up to 55 and then decreased significantly. Srivastava *et al* (2003) found that men and women increased marginally in openness up to age 30 and then decreased.

Figure 3. Big Five factors broken down by age and gender

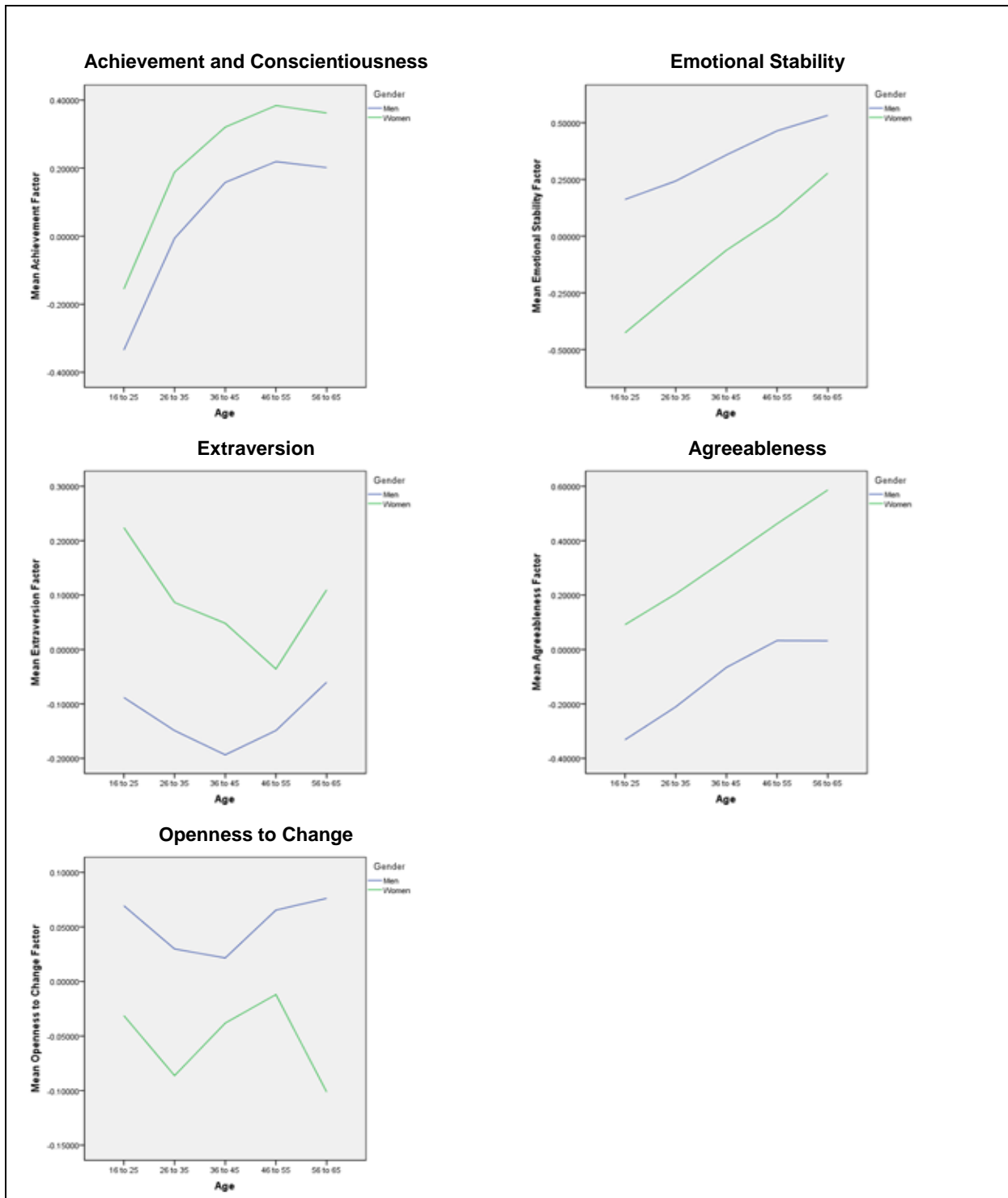


Table 16. Means and standard deviations of men and women (N=25,000)

Scale	Men		Women		Sig.
	Mean	SD	Mean	SD	
Achievement and Conscientiousness	-0.07	1.02	0.07	0.97	.00
Emotional stability	0.26	0.92	-0.26	1.01	.00
Extraversion	-0.13	1.00	0.13	0.99	.00
Agreeableness	-0.20	1.00	0.20	0.96	.00
Openness to change	0.05	1.00	-0.05	1.00	.00
Friendly	20.52	6.14	21.35	6.07	.00
Gregarious	17.12	5.70	18.39	5.79	.00
Assertive	19.07	5.20	18.65	5.19	.00
Energetic	19.15	4.85	19.94	4.59	.00
Trusting	19.98	5.51	20.19	5.63	.00
Straightforward	21.26	4.66	22.22	4.38	.00
Considerate	21.30	4.54	23.09	4.27	.00
Modest	15.52	5.07	16.31	4.85	.00
Imaginative	19.06	4.41	19.23	4.41	.00
Innovative	20.54	5.18	19.64	5.06	.00
Rule-Breaking	14.69	4.62	13.18	4.61	.00
Adaptable	20.26	4.82	19.82	5.05	.00
Competent	22.38	4.74	22.79	4.61	.00
Organized	20.62	5.03	20.95	5.15	.00
Achieving	22.58	5.75	23.52	5.41	.00
Proactive	19.85	5.73	20.24	5.65	.00
Relaxed	19.25	5.82	17.24	5.97	.00
Contented	21.54	6.60	20.48	6.83	.00
Self-Assured	19.65	5.94	19.15	5.93	.00
Resilient	21.25	5.67	19.31	5.88	.00

N=12,500 men, 12,500 women

Table 17. Correlations of B5PQ scores with age (N=25,000)

Scale	Age	Sig.
Achievement and Conscientiousness	0.21	0.00
Emotional stability	0.17	0.00
Extraversion	-0.07	0.00
Agreeableness	0.12	0.00
Openness to change	-0.01	0.34
Friendly	0.04	0.00
Gregarious	-0.02	0.01
Assertive	0.07	0.00
Energetic	0.21	0.00
Trusting	0.21	0.00
Straightforward	0.21	0.00
Considerate	0.09	0.00
Modest	0.02	0.01
Imaginative	-0.11	0.00
Innovative	0.17	0.00
Rule-Breaking	0.02	0.01
Adaptable	0.12	0.00
Competent	0.19	0.00
Organized	0.12	0.00
Achieving	0.21	0.00
Proactive	0.25	0.00
Relaxed	0.14	0.00
Contented	0.16	0.00
Self-Assured	0.12	0.00
Resilient	0.22	0.00

7. References

- Baron, H., Bartram, D. & Kurz, R. (2003). The Great 8 as a framework for validation research. In *Occupational Psychology Conference 2003: Book of Proceedings*. Leicester, UK: British Psychological Society.
- Barrick, M. R. & Mount, M. K. (1991). The big five personality dimensions and job performance: a meta-analysis. *Personnel Psychology*, 44, 1-26.
- Bartram, D. (2002). *EFPA Review Model for the Description and Evaluation of Psychological Tests: Notes for Reviewers*. efpa.be: European Federation of Psychologists' Associations.
- Bartram, D., Baron, H. & Kurz, R. (2003). *Let's Turn Validation on its Head*. Paper presented to BPS Occupational Psychology Conference 2003.
- Collins, J. (2001). *Good to Great: Why Some Companies Make the Leap and Others Don't*. New York, NY: Harper Business.
- Costa, P. T., Jr, & McCrae, R. R. (1992). *Revised NEO Personality Inventory (Neo-PI-R) and NEO Five-Factor Inventory (NEO-FFI): Professional Manual*. Odessa, FL: Psychological Assessment Resources.
- Disability Discrimination Act* (1995). London, UK: The Stationary Office.
- Goldberg, L. R. (1992). The development of markers for the Big-Five factor structure. *Psychological Assessment*, 4, 26-42.
- Goleman, D. (1998). *Working With Emotional Intelligence*. New York, NY: Bantam.
- Gosling, S. D., Rentfrow, P. J. & Swann, W. B. Jr (2003). A very brief measure of the Big-Five personality domains. *Journal of Research in Personality*, 37, 504–528.
- Hogan, R., Johnson, J. & Briggs, S. (1997). *Handbook of Personality Psychology*. San Diego, CA: Academic Press.
- Hough, L. M. (1998). Effects of intentional distortion in personality measurement and evaluation of suggested palliatives. *Human Performance*, 11, 209–244.
- International Personality Item Pool (2001). *A Scientific Collaboratory for the Development of Advanced Measures of Personality Traits and Other Individual Differences*. Internet Web Site: <http://ipip.ori.org>.
- Kirton, M. J. (1977). Adaptors and innovators and superior-subordinate identification. *Psychological Reports*, 41, 289-290
- Kirton, M. J. (1994). *Adaptors and Innovators: Styles of Creativity and Problem Solving*. London, UK: Thomson Learning.
- Kirton, M. J. (2002). *Adaption-Innovation in the Context of Diversity and Change*. London, UK: Routledge.

- Kurz, R. & Bartram, D. (2002). Competency and individual performance: modelling the world of work. In I.T. Robertson, M. Callinen & D. Bartram (Eds), *Organizational Effectiveness: The Role of Psychology*. Chichester, UK: Wiley.
- McCrae, R. R. & Costa, P. T. (1983). Social desirability scales: more substance than style. *Journal of Consulting and Clinical Psychology*, 51, 882–888.
- McCrae, R. R., Costa, P. T. Jr, Lima, M. P., Simoes, A., Ostendorf, F., Angleitner, A., Marusic, I., Bratko, D., Caprara, G. V., Barbaranelli, C., Chae, J. H., & Piedmont, R. L. (1999). Age differences in personality across the adult lifespan: parallels in five cultures. *Developmental Psychology*, 35, 466-477.
- Robertson, I. T., *Personality and Work Behaviour (1997) Keynote Address to 2nd Australian Industrial and Organizational Psychology Conference*.
- Saucier, G. & Goldberg, L. R. (2002). Assessing the Big Five: applications of 10 psychometric criteria to the development of marker scales. In B. de Raad & M. Perugini (Eds), *Big Five Assessment*. Goettingen, Germany: Hogrefe & Huber.
- Saucier, G. (2002b). Orthogonal markers for orthogonal factors: the case of the Big Five. *Journal of Research in Personality*, 36(1), 1-31.
- Schmitt, N., Gooding, R., Noe, R. & Kirsch, M. (1984). Metaanalysis of validity studies published between 1964 and 1982 and the investigation of study characteristics. *Personnel Psychology*, 37, 407-422.
- SHL (1999). *OPQ32 Manual and User's Guide*. Surrey, UK: Saville & Holdsworth Ltd Group plc.
- Srivastava, S., John, O. P., Gosling, S. D. & Potter, J. (2003). Development of personality in early and middle adulthood: Set like plaster or persistent change? *Journal of Personality and Social Psychology*, 84, 1041-1053.
- Tett, R. P., Jackson, D. N. & Rothstein, M. G. (1991). Personality measures as predictors of job performance: a meta-analytic review. *Personnel Psychology*, 44, 703-742.
- Thurstone, L. L. (1947). *Multiple Factor Analysis*. Chicago, IL: University of Chicago Press.

Copyright © 2011, MySkillsProfile.com Limited.
www.myskillsprofile.com.com.

B5PQ is a trademark of MySkillsProfile.com Limited.

All rights reserved. No part of this publication may be reproduced or distributed in any form or by any means or stored in a database or retrieval system without the prior written permission of MySkillsProfile.com Limited.