

Stress Assessment Questionnaire (SAQ)

Professional Manual

© myskillsprofile.com, 2002-2009.

The reproduction of any part of this manual by a duplicating machine, photocopying process or any other method including installation process is breaking the copyright law.

Contents

1. Introduction	4
2. Administration and Interpretation	6
Administration	6
Interpretation	6
S1: Job Dissatisfaction	7
S2: Relationship Dissatisfaction.....	8
S3: Parenting Dissatisfaction	9
S4: Stressful Incidents.....	10
S5: Emotional Symptoms.....	11
S6: Behavioural Symptoms.....	12
S7: Physical Symptoms	13
S8: Social Support	14
S9: Self-Regulation.....	15
S10: Problem Solving.....	16
S11: Distraction.....	17
S12: Health	18
S13: Procrastination.....	19
S14: Perfectionism.....	20
S15: Self-Esteem.....	21
S16: Depressed	22
S17: Anxious.....	23
Computer-Generated Report.....	24
3. Development	25
Questionnaire Construction.....	25
4. Norms	26
SAQ Normative Sample	26
Gender and Age Differences	31
5. Reliability and Validity	35

SAQ Scale Intercorrelations	37
Standard Error of Difference	41
Factor Analysis of SAQ.....	43
Relationship of SAQ Scales to IPIP Marker Variables	45
Criterion Validity.....	46
<i>References</i>	47

1. Introduction

Stress results from factors such as dissatisfaction with work, personal relationships and parental responsibilities alongside critical life incidents such as illness, family bereavement or unemployment. Stress produces short term emotional, behavioural and physical symptoms of varying intensity moderated by the individual's coping style and personality. Chronic stress invariably produces lower self-esteem and can also produce symptoms of depression and anxiety disorder.

The SAQ is a multi-factor stress assessment instrument that measures four major stress domains together with 17 traits or facets / elements that define these four domains. The four domains cover possible sources of stress, common symptoms, coping style and personality factors.

The SAQ is designed for stress counselling interventions where its main function is to help develop the client's understanding of stress and whether they should seek professional help. The SAQ report is intended to help clarify things for the client but it cannot in any way replace a formal assessment by a qualified mental health professional.

The questionnaire meets many of the important benchmarks of a modern psychometric measure specified in the EFPA review model (Bartram, 1998):

- the median consistency of the SAQ scales is 0.80 which is considered excellent as an overall reliability rating;
- the median correlation of relevant SAQ scales with IPIP marker variables is 0.82 indicating good construct validity;
- the correlation between the generalised stress symptoms factor and the Holmes-Rahe Social Adjustment Scale is 0.29 providing evidence of criterion-related validity;
- the factor structure of the questionnaire shows clear evidence of three factors measuring stress, coping style and personality dimensions corresponding to key conceptual building blocks of the inventory;
- the SAQ questionnaire differentiates effectively between the constructs of sources of stress, symptoms of stress, coping style and personality;
- norms are based on a large international sample of 1,000 respondents with equal representation of males and females;
- computer-generated reports designed for clients and counsellors provide clear descriptions of patterns of scale scores.

Stress Assessment Questionnaire

Lower			Average			Higher				Dimension		
1	2	3	4	5	6	7	8	9	10			
											Work: Dissatisfied with job, stress arises from various work conditions	Sources
											Relationship: Suffers stress as a result of relationship difficulties in personal life	
											Parenting: Experiences stress as a result of work overload from childrearing and family	
											Incidents: Has experienced critical life events that can produce stress	
											Emotional: Worries, feels afraid, has intrusive thoughts, may have panic attacks	Symptoms
											Behavioural: Feels tired, works less efficiently, has difficulty concentrating	
											Physical: Multiple symptoms such as indigestion, headaches, skin complaints	
											Social Support: Talks through problems, seeks social support to help reduce stress	Strategies
											Self-Regulation: Recognises and manages feelings and emotions	
											Problem Solving: Seeks to understand, control and improve situation	
											Distraction: Seeks distractions to reduce pressure and take mind off things	
											Health: Keeps in shape, eats healthy diet, moderates drinking	
											Procrastination: Puts things off, avoids completing projects, lacks initiative	Stability
											Perfectionism: Holds unrealistic standards about self and other people	
											Self-Esteem: Lacks self-respect, feels worthless, judges self to be a failure	
											Depression: Feels unhappy, guilty and inadequate, loses motivation and interest	
											Anxiety: Worries excessively, has feelings of fear, relives upsetting events	

2. Administration and Interpretation

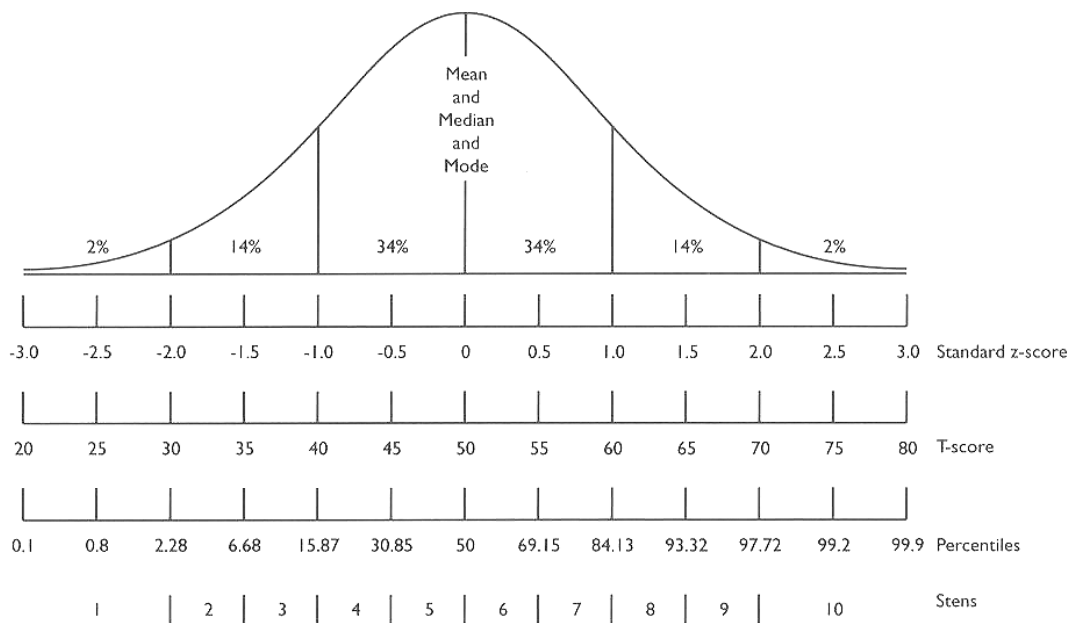
Administration

SAQ materials consist of the manual, online instructions and questionnaire and computer-generated report and profile sheet. You should tell clients about the assessment process covering the purpose of using the SAQ along with any other tests used and what sort of feedback they can expect to receive. It is important that test takers understand how the SAQ is being used and who has access to their information. Face to face feedback is recommended.

Interpretation

The SAQ scales measure psychological traits that are normally distributed. In the SAQ profile sheet and computer-generated report, test takers' scores are reported on the Sten (Standard Ten) scale that provides a scale of ten points. Figure 1 shows how the Sten scale and other commonly used scales map onto the normal distribution curve. It is common practice to use this information to make comparative descriptions of the client's profile – for example, “John Smith has more perfectionist tendencies than the average person” (ie a Sten score of 8 or higher).

Figure 1 : Normal Distribution Curve



S1: Job Dissatisfaction

LOW SCORER		HIGH SCORER	
Description Gets satisfaction and fulfilment from work.		Description Is dissatisfied with current work.	
Typical Item I have felt empowered at work.		Typical Item I have felt that my job was insecure.	
Key Behaviours Gains satisfaction from work. Feels empowered, is consulted about changes, has chance for advancement, is satisfied with pay. Tends to use social support network to cope with stress.		Key Behaviours Feels dissatisfied with current employment because of factors such job insecurity, overload, having an unsupportive boss, having little control over job. May suffer from low self-esteem and display symptoms of stress, depression and anxiety.	
MODERATE SCORER			
As satisfied with work as the average person. Or Moderately satisfied/dissatisfied. Or Satisfied/dissatisfied some of the time.			
RELATIONSHIP WITH OTHER SCALES		Positive	Negative
Strongest correlations		Low Self-Esteem Depression Anxiety Behavioural Stress Symptoms	Social Support Coping Style

S2: Relationship Dissatisfaction

LOW SCORER		HIGH SCORER	
<p>Description</p> <p>Satisfied with relationship with current partner.</p>		<p>Description</p> <p>Dissatisfied with relationship with current partner.</p>	
<p>Typical Item</p> <p>I have had a loving relationship with partner.</p>		<p>Typical Item</p> <p>I have had rows with my partner.</p>	
<p>Key Behaviours</p> <p>Enjoys doing things with partner. Communicates, gets on well, has good sex life. Tends to use social support network to cope with stress.</p>		<p>Key Behaviours</p> <p>Keeps things from partner. Tends to argue a lot. Feels unable to confide in partner. Feels partner ignores his/her needs. May suffer from low self-esteem and display symptoms of stress, depression and anxiety.</p>	
MODERATE SCORER			
<p>As satisfied with personal relationship as the average person.</p> <p>Or</p> <p>Gets on well in some situations but not others.</p> <p>Or</p> <p>Moderately satisfied with relationship.</p>			
RELATIONSHIP WITH OTHER SCALES		Positive	Negative
<p>Strongest correlations</p>		<p>Low Self-Esteem Depression Anxiety Behavioural Stress Symptoms</p>	<p>Social Support Coping Style</p>

S3: Parenting Dissatisfaction

LOW SCORER		HIGH SCORER	
<p>Description</p> <p>Satisfied with parental role.</p>		<p>Description</p> <p>Dissatisfied with parental role.</p>	
<p>Typical Item</p> <p>I have found my children are a joy and fun to be with.</p>		<p>Typical Item</p> <p>I have felt unable to cope with my children.</p>	
<p>Key Behaviours</p> <p>Happy with partner's contribution to the children, finds the children are a joy and fun to be with, enjoys being a parent. Is emotionally close to his/her children. Able to control feelings and emotions when parental role causes stress.</p>		<p>Key Behaviours</p> <p>Feels unable to cope, unappreciated by his/her children, controlled and dominated by their needs and demands. Overwhelmed by the demands of being a parent. May suffer from low self-esteem and display symptoms of stress, depression and anxiety.</p>	
MODERATE SCORER			
<p>Neither very satisfied not very dissatisfied but in between.</p> <p>Or</p> <p>Feels happy some of the time.</p> <p>Or</p> <p>Is as satisfied with parental role as the average person.</p>			
RELATIONSHIP WITH OTHER SCALES		Positive	Negative
<p>Strongest correlations</p>		<p>Low Self-Esteem Depression Anxiety Behavioural Stress Symptoms</p>	<p>Self-Regulation Coping Style</p>

S4: Stressful Incidents

LOW SCORER		HIGH SCORER	
Description Has experienced few or no critical life events.		Description Has experienced a lot of critical life events that often produce stress.	
Typical Item Separation from partner.			
Key Behaviours This scale measures how far the client has experienced critical life events that often cause stress. The higher the score the more likely these are to cause stress.			
MODERATE SCORER			
Has experienced as many critical incidents/stressful experiences in the last 2 years as the average person.			
RELATIONSHIP WITH OTHER SCALES		Positive	Negative
Strongest correlations		Generalised stress factor	Social Support Coping Style Self-Regulation

S5: Emotional Symptoms

LOW SCORER		HIGH SCORER	
Description Experiences few or no common emotional symptoms of stress.		Description Experiences some common emotional symptoms of stress.	
Typical Item I have been afraid of losing control.			
Key Behaviours Does not experience the emotional symptoms of stress. Able to recognise and control feelings and emotions successfully when put under stress.		Key Behaviours Examples of emotional symptoms include spending less time with people, recurrent thoughts about a bad experience, worrying a lot, trembling, nightmares, being afraid to drive and being nervous around people. May suffer from low self-esteem and display symptoms of depression and anxiety.	
MODERATE SCORER			
Experiences some emotional symptoms of stress. Or Experiences emotional symptoms on some occasions but not others. Or Experiences as many emotional symptoms of stress as the average person who has completed the questionnaire.			
RELATIONSHIP WITH OTHER SCALES		Positive	Negative
Strongest correlations		Anxiety Depression Behavioural Stress Physical Stress Symptoms	Self-Regulation

S6: Behavioural Symptoms

LOW SCORER		HIGH SCORER	
Description Experiences few or no common behavioural symptoms of stress.		Description Experiences some common behavioural symptoms of stress.	
Typical Item I have experienced periods of confusion.			
Key Behaviours Does not experience the behavioural symptoms of stress. Able to recognise and control feelings and emotions when put under stress.		Key Behaviours Examples of behavioural symptoms include working less efficiently, experiencing periods of confusion, having trouble paying attention, becoming forgetful and losing train of thought. May suffer from low self-esteem and display symptoms of depression and anxiety.	
MODERATE SCORER			
Experiences some behavioural symptoms of stress. Or Experiences behavioural symptoms on some occasions but not others. Or Experiences as many behavioural symptoms of stress as the average.			
RELATIONSHIP WITH OTHER SCALES		Positive	Negative
Strongest correlations		Anxiety Depression Low Self-Esteem	Self-Regulation

S7: Physical Symptoms

LOW SCORER		HIGH SCORER	
Description Experiences few or no common physical symptoms of stress.		Description Experiences some common physical symptoms of stress.	
Typical Item I have experienced periods of confusion.			
Key Behaviours Does not experience the physical symptoms of stress. Able to recognise and control feelings and emotions when put under stress.		Key Behaviours Examples of physical symptoms include feeling light-headed, headaches, pains in chest, periods of breathlessness and palpitations. May suffer from low self-esteem and display symptoms of depression and anxiety.	
MODERATE SCORER			
Experiences some physical symptoms of stress. Or Experiences physical symptoms on some occasions but not others. Or Experiences as many physical symptoms of stress as the average person.			
RELATIONSHIP WITH OTHER SCALES		Positive	Negative
Strongest correlations		Anxiety Emotional Stress Symptoms Behavioural Stress Symptoms	Self-Regulation Coping Style

S8: Social Support

LOW SCORER		HIGH SCORER	
Description Tries to cope on own.		Description Looks to a support network to help cope with stress.	
Typical Item I have been able to count on friends/family to help me when I have been down-in-the-dumps			
Key Behaviours Likes to solve problems on own, keeps feelings and emotions to self. May not have social network to provide support.		Key Behaviours Is able to count on social support network to talk through problems, to provide distraction from worries, to help when under pressure, to care about what happens to him/her. Uses support network to counter depression and boost self-esteem.	
MODERATE SCORER			
Looks to others for support in some situations but not others. Or Relies on support from others as much as the next person. Or Come across as reasonably independent/resourceful in solving own problems.			
RELATIONSHIP WITH OTHER SCALES		Positive	Negative
Strongest correlations		Distraction Coping Style	Low Self-Esteem Depression

S9: Self-Regulation

LOW SCORER		HIGH SCORER	
<p>Description</p> <p>Finds it hard to manage feelings and emotions.</p>		<p>Description</p> <p>Recognises and controls feelings and emotions.</p>	
<p>Typical Item</p> <p>When I have been under stress, I have got very emotional.</p>		<p>Typical Item</p> <p>When I have been under stress, I have been able to control my feelings and emotions.</p>	
<p>Key Behaviours</p> <p>Gets angry, lashes out at people, gets very emotional, says inappropriate things.</p>		<p>Key Behaviours</p> <p>Recognises emotions, able to control them, stays positive and composed in stressful situations, thinks clearly and stays focused, does not lash out at people. Tries to solve problems and keep healthy and fit when under stress.</p>	
MODERATE SCORER			
<p>Controls their feelings and emotions as well as the next person. Or Manages to stay in control in some situations but loses it in others. Or As emotionally controlled as the next person.</p>			
RELATIONSHIP WITH OTHER SCALES		Positive	Negative
Strongest correlations		Problem Solving Coping Style Good Health	Low Self-Esteem Depression Anxiety

S10: Problem Solving

LOW SCORER		HIGH SCORER	
Description Does not understand nor manage stress.		Description Takes action to understand problems and reduce stress.	
Typical Item When I have felt stressed, I have thought hard about what steps to take.			
Key Behaviours Loses feeling of being in control, does not analyse situation, does not know what to do to reduce stress. Tends to be paralysed by stress.		Key Behaviours Tries to solve problems Finds ways to reduce stress, tries to understand the situation, analyses the problem, makes an extra effort. Tends also to deploy distraction coping style and tries to stay fit and healthy.	
MODERATE SCORER			
As likely to try to understand the situation as the next person. Or Takes action in some situations but not in others. Or Shows a moderate degree of initiative in trying to reduce stress.			
RELATIONSHIP WITH OTHER SCALES		Positive	Negative
Strongest correlations		Distraction Coping Style Good Health	Low Self-Esteem Depression

S11: Distraction

LOW SCORER		HIGH SCORER	
Description Does not use distraction as coping strategy.		Description Seeks activity and distractions to reduce stress.	
Typical Item When I have felt stressed, I have gone for walks to reflect on things.			
Key Behaviours Tends to be absorbed and overwhelmed by stress. Does not know how to take mind off problems. May not have social support network to help alleviate stress.		Key Behaviours Seeks out company of other people, goes shopping to take mind off things, treats self to feel better, goes for walks to reflect on things. Tends also to deploy problem solving and social support coping styles.	
MODERATE SCORER			
Is able to find distractions some of the time. Or Copes by seeking distractions as often as the average person. Or Is moderately able to detach self from problems.			
RELATIONSHIP WITH OTHER SCALES		Positive	Negative
Strongest correlations		Problem Solving Coping Style Social Support Coping Style	

S12: Health

LOW SCORER		HIGH SCORER	
Description Lets self get out of shape.		Description Manages diet and takes exercise to stay fit.	
Typical Item I have missed work through illness.		Typical Item I have taken part in regular sports or physical activity.	
Key Behaviours Often misses work through illness, is overweight, feels guilty about drinking. Tends to suffer from broad range of stress symptoms, and display symptoms of depression and anxiety.		Key Behaviours Enjoys good health, takes regular sports or physical activity, eats healthy diet. Tries to stay fit and healthy to counter likelihood of experiencing stress, depression and anxiety.	
MODERATE SCORER			
Is as fit and healthy as the next person. Or As liable to lapse into bad diet/lack of exercise as next person. Or Likely to miss work through sickness as much as the next person.			
RELATIONSHIP WITH OTHER SCALES		Positive	Negative
Strongest correlations		Self-Regulation Coping Style	Physical Stress Symptoms Emotional Stress Symptoms Behavioural Stress Symptoms Depression Anxiety Low Self-Esteem

S13: Procrastination

LOW SCORER		HIGH SCORER	
Description Does things quickly, shows initiative.		Description Puts things off, avoids completing projects, lacks initiative.	
Typical Item I have accomplished things ahead of schedule.		Typical Item I have delayed starting work.	
Key Behaviours Plans things well in advance, returns phone calls promptly, makes decisions quickly. Has perfectionistic tendencies.		Key Behaviours Postpones decisions, delays starting work, leaves things to the last minute, needs a push to get started. Tends to display symptoms of stress, depression and anxiety.	
MODERATE SCORER			
<p>Puts things off as often as the average person.</p> <p>Or</p> <p>Shows an average amount of procrastination.</p> <p>Or</p> <p>Delays starting work on some occasions but not others.</p>			
RELATIONSHIP WITH OTHER SCALES		Positive	Negative
Strongest correlations		Behavioural Stress Symptoms Low Self-Esteem Depression Anxiety	Perfectionism

S14: Perfectionism

LOW SCORER		HIGH SCORER	
Description Is disorganised and leaves things unfinished.		Description Is methodical and systematic and likes to get the detail right.	
Typical Item I have left others look after the details.		Typical Item I have wanted everything to be perfect.	
Key Behaviours More disorganised in work and personal life. Leaves others to look after the detail and tidy up behind him. Tends to procrastinate and may display behavioural symptoms of stress.		Key Behaviours Organises their work and personal lives, develops plans, and checks things to ensure everything is right. Has high standards which others may find difficult to achieve. Tries to solve problems when under stress.	
MODERATE SCORER			
Is organised and methodical when it suits. Or Shows as much concern over the detail as the next person. Or Is moderately tidy and organised.			
RELATIONSHIP WITH OTHER SCALES		Positive	Negative
Strongest correlations		Problem Solving Coping Style	Behavioural Stress Symptoms Procrastination

S15: Self-Esteem

LOW SCORER		HIGH SCORER	
Description Has high self-esteem.		Description Suffers from low self-esteem.	
Typical Item I have had a positive attitude towards myself.		Typical Item I have felt I do not have much to be proud of.	
Key Behaviours Feels has many good qualities, has a positive attitude towards self, is satisfied with own achievements. Copes with stress using social networks, self-regulation and by trying to stay fit and healthy.		Key Behaviours Feels like a failure, lacks self-respect, dislikes self. Tends to display broad range of stress symptoms as well as symptoms of depression and anxiety.	
MODERATE SCORER			
Has self-esteem in some situations but not others. Or Has as much self-esteem as the average person. Or Feels fairly self-confident.			
RELATIONSHIP WITH OTHER SCALES		Positive	Negative
Strongest correlations		Depression Anxiety Emotional Stress Symptoms Behavioural Stress Symptoms Physical Stress Symptoms	Social Support Coping Style Self-Regulation Coping Style Good Health

S16: Depressed

LOW SCORER		HIGH SCORER	
Description Feels comfortable with life and positive about the future.		Description Is prone to feeling depressed and pessimistic about the future.	
Typical Item I have been full of energy.		Typical Item I have felt depressed.	
Key Behaviours Feels comfortable with self and happy with life. Feels positive about the future and looks on the bright side. Is generally relaxed, resilient and self-confident.		Key Behaviours Feels depressed and is unhappy with self. Has frequent mood swings and tends to have a pessimistic outlook. Prone to worry and lacks self-confidence.	
MODERATE SCORER			
Is as comfortable with self as the average person. Or Feels depressed / low as often as the next person. Or Is fairly content with life.			
RELATIONSHIP WITH OTHER SCALES		Positive	Negative
Strongest correlations		Low Self-Esteem Anxiety Emotional Stress Symptoms Behavioural Stress Symptoms	Social Support Coping Style Self-Regulation Coping Style Good Health

S17: Anxious

LOW SCORER		HIGH SCORER	
Description Presents self as stable and relaxed.		Description Displays symptoms of anxiety disorder.	
Typical Item I have relived upsetting events from the past.			
Key Behaviours Does not experience typical symptoms of anxiety disorder. Able to recognise and control feelings and emotions when under stress. Tries to stay fit and healthy.		Key Behaviours Is afraid of many things, avoids social situations because of feelings of fear, has recurrent thoughts and images that have refused to go away, feels compelled to perform certain behaviours repeatedly.	
MODERATE SCORER			
Usually relaxed but occasionally feels anxious. Or Is as anxious as the average person. Or Is moderately anxious.			
RELATIONSHIP WITH OTHER SCALES		Positive	Negative
Strongest correlations		Low Self-Esteem Depression Emotional Stress Symptoms Behavioural Stress Symptoms	Self-Regulation Coping Style Good Health

Computer-Generated Report

The SAQ report provides interpretive text and graphical representation of the printed profile chart. The report contains a description of the test taker's profile against each of the seventeen scales grouped under five headings: sources of stress, symptoms of stress, coping style, perfectionism and procrastination, and mental health. The report is intended for the counsellor and the client but it is written in second person. It is intended to be transparent and make explicit the linkages between the scores and the text. The tone of the report is non-directive. The report is finished to publication quality output but both the presentation and contents can easily be modified by word processor.

3. Development

The SAQ was designed to provide an integrated multi-factor stress assessment measure for counselling. Examination of existing instruments revealed that most tended to offer a partial view of stress by focusing on one or two dimensions – for example, stress arising from job-related factors, stress symptoms, perfectionism etc. We wanted to develop a broad measure that would provide the following:

- an assessment of the factors causing stress in the client's life covering work, relationships, parental responsibilities;
- a summary of the client's experience of critical life incidents that often produce stress such as those measured by the Holmes-Rahe Social Adjustment Scale;
- an assessment of how far the client was displaying common symptoms of stress;
- a picture of the client's coping strategies and personality;
- an indication of the potential impact of stress on the client's mental health.

Questionnaire Construction

The SAQ was developed in the following steps.

1. A concept / rational model of the instrument was developed based on seventeen scales covering the dimensions described above..
2. A prototype inventory was developed. Scales were constructed using item data identified in the literature search. These included a mixture of positively and negatively keyed / phrased items.
3. The prototype questionnaire together with a basic report generation facility providing feedback was established on the Internet and advertisements were placed on the Google search engine inviting people to take a free stress assessment.
4. Analysis of the growing database was conducted at regular intervals to check the reliability of the scales and explore the factor structure of the instrument. Poorly performing items were changed to improve scale reliability. Exploratory factor analysis indicated that the pilot questionnaire was tapping three stress domains.
5. The final questionnaire was assembled and norms were collected over the Internet. Respondents who gave their ages as under 18 or over 64 were excluded from the normative sample. Cases of random or haphazard responding identified from visual inspecting the data were deleted.

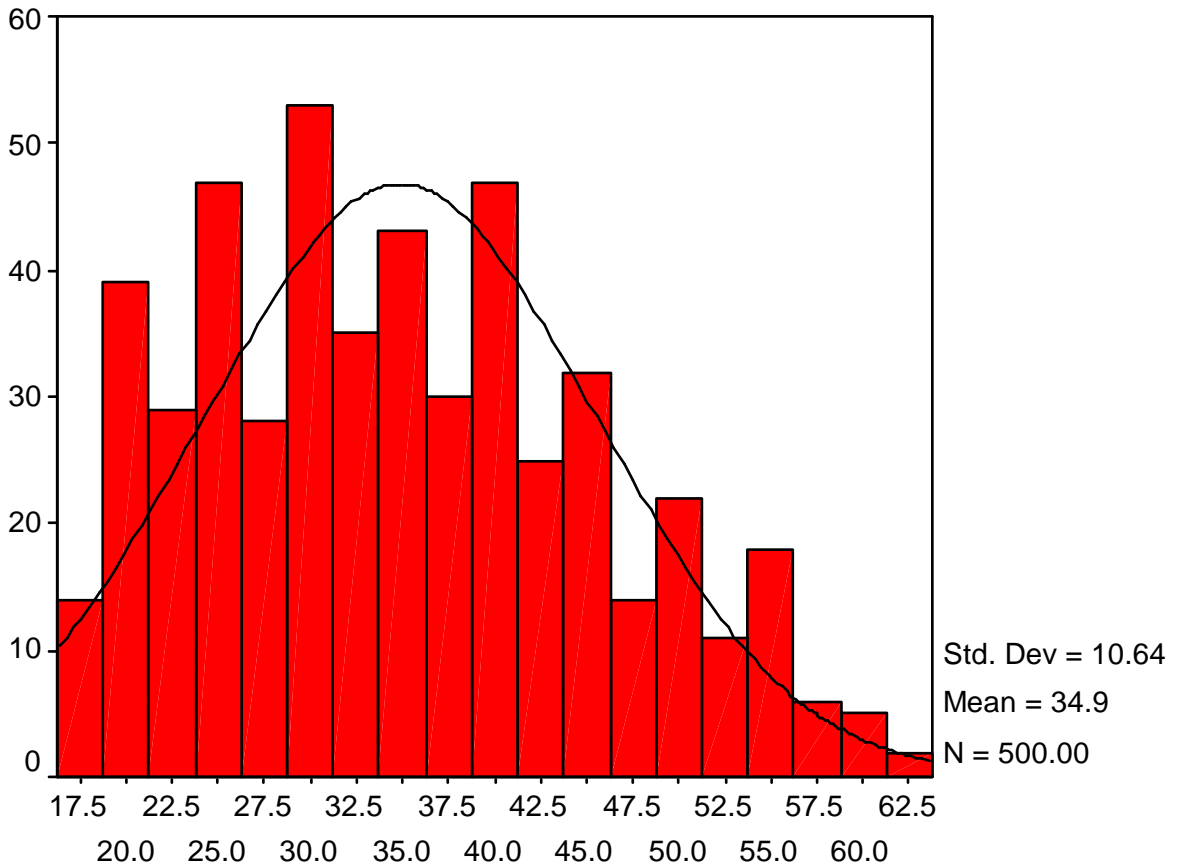
4. Norms

SAQ Normative Sample

SAQ norms are based on an international managerial and professional sample of 1,000 men and women who completed the questionnaire on the Internet. The normative sample is made up of samples of 500 men and 500 women. These samples were selected randomly from a larger sample of respondents who had been invited to complete a free assessment.

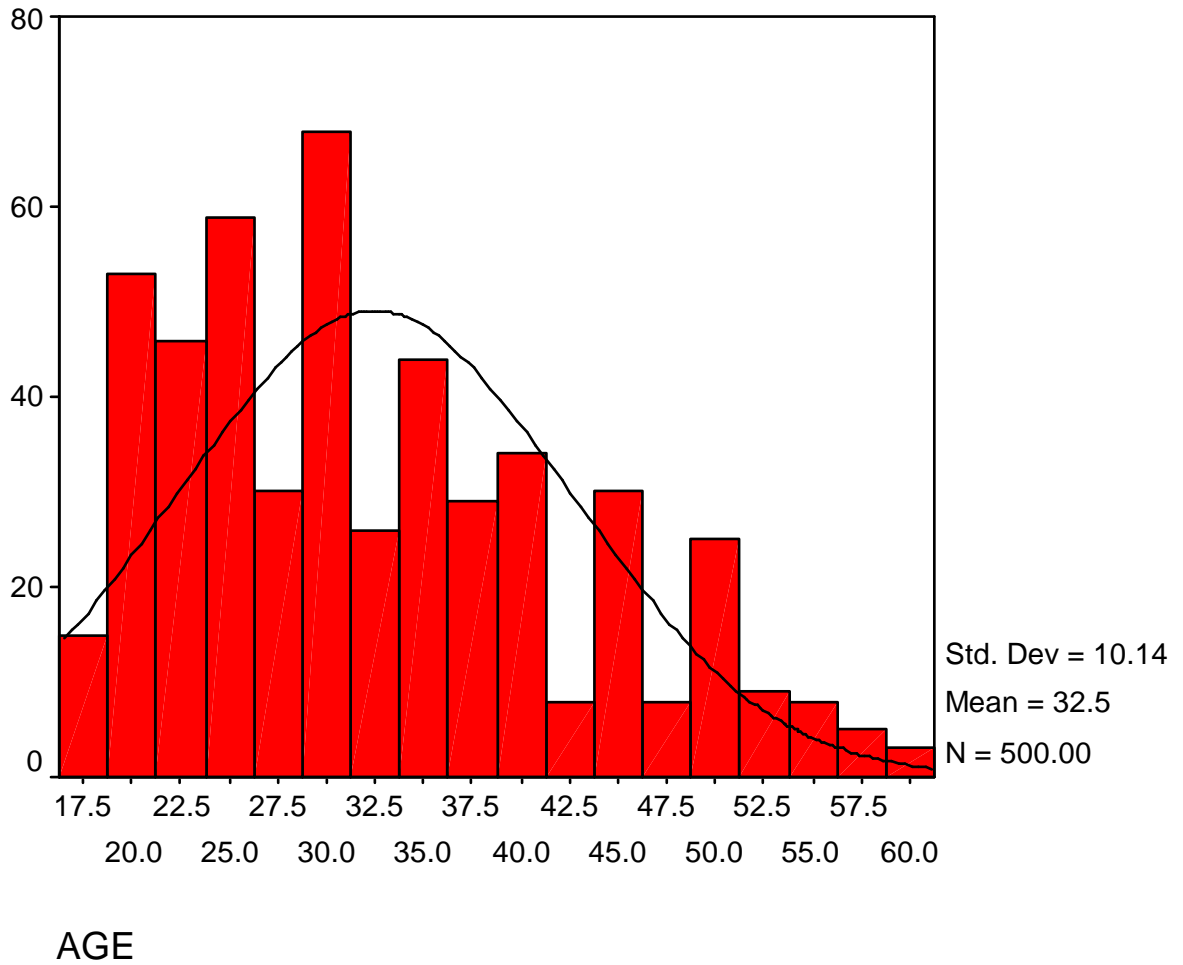
The age distributions of the male and female samples are shown below. The mean age of the male sample is 35 years with a standard deviation of 11.

Men



AGE

Women



The mean age of the female sample is 33 with a standard deviation of 10. Tables 1-3 provide combined gender norms and separate male and female norms. Six hundred and sixty nine people reported that they had a spouse or partner. Four hundred and twenty one stated that they had one or more children.

Table 1: SAQ Norms (ns = 500 men, 500 women)

1	2	3	4	5	6	7	8	9	10	Scale	Mean	SD
0 - 6	7 - 8	9 - 11	12 - 13	14 - 16	17 - 19	20 - 21	22 - 24	25 - 26	27 - 32	Work	16.93	5.14
0 - 0	1 - 3	4 - 6	7 - 9	10 - 13	14 - 16	17 - 19	20 - 22	23 - 25	26 - 32	Relationship	13.50	6.19
0 - 0	0 - 1	2 - 5	6 - 8	9 - 12	13 - 15	16 - 18	19 - 22	23 - 25	26 - 32	Parenting	12.56	6.74
0 - 0	1 - 3	4 - 7	8 - 10	11 - 13	14 - 17	18 - 20	21 - 23	24 - 27	28 - 32	Emotional	14.24	6.70
0 - 3	4 - 6	7 - 9	10 - 11	12 - 14	15 - 17	18 - 20	21 - 23	24 - 26	27 - 32	Behavioural	15.34	5.79
0 - 0	1 - 3	4 - 6	7 - 9	10 - 12	13 - 15	16 - 18	19 - 21	22 - 24	25 - 32	Physical	12.92	5.98
0 - 1	2 - 5	6 - 9	10 - 13	14 - 17	18 - 21	22 - 25	26 - 29	30 - 32		Social Support	17.88	7.95
0 - 3	4 - 6	7 - 9	10 - 12	13 - 14	15 - 17	18 - 20	21 - 23	24 - 25	26 - 32	Self-Regulation	15.30	5.52
0 - 4	5 - 7	8 - 10	11 - 12	13 - 15	16 - 18	19 - 20	21 - 23	24 - 25	26 - 32	Problem Solving	15.92	5.23
0 - 3	4 - 6	7 - 8	9 - 11	12 - 13	14 - 15	16 - 18	19 - 20	21 - 22	23 - 32	Distraction	13.88	4.74
0 - 7	8 - 9	10 - 12	13 - 15	16 - 18	19 - 20	21 - 23	24 - 26	27 - 28	29 - 32	Health	18.55	5.37
0 - 4	5 - 7	8 - 10	11 - 13	14 - 15	16 - 18	19 - 21	22 - 23	24 - 26	27 - 32	Procrastination	16.26	5.48
0 - 11	12 - 13	14 - 15	16 - 17	18 - 19	20 - 21	22 - 23	24 - 25	26 - 27	28 - 32	Perfectionism	19.89	3.81
0 - 0	1 - 4	5 - 7	8 - 11	12 - 15	16 - 18	19 - 22	23 - 26	27 - 29	30 - 32	Self-Esteem	15.60	7.31
0 - 4	5 - 7	8 - 10	11 - 13	14 - 16	17 - 19	20 - 22	23 - 25	26 - 28	29 - 32	Depression	17.02	5.91
0 - 1	2 - 4	5 - 8	9 - 11	12 - 14	15 - 18	19 - 21	22 - 24	25 - 28	29 - 32	Anxiety	15.35	6.75
1	2	3	4	5	6	7	8	9	10			

Table 2: SAQ Norms for Men (n =500)

1	2	3	4	5	6	7	8	9	10	Scale	Mean	SD
0 - 5	6 - 8	9 - 10	11 - 13	14 - 16	17 - 18	19 - 21	22 - 24	25 - 26	27 - 32	Work	16.71	5.22
0 - 0	1 - 3	4 - 6	7 - 9	10 - 12	13 - 16	17 - 19	20 - 22	23 - 25	26 - 32	Relationship	13.42	6.33
0 - 0	0 - 0	1 - 4	5 - 7	8 - 10	11 - 14	15 - 17	18 - 20	21 - 23	24 - 32	Parenting	11.29	6.60
0 - 0	0 - 2	3 - 5	6 - 9	10 - 12	13 - 15	16 - 19	20 - 22	23 - 25	26 - 32	Emotional	12.89	6.73
0 - 2	3 - 5	6 - 8	9 - 11	12 - 14	15 - 16	17 - 19	20 - 22	23 - 25	26 - 32	Behavioural	14.55	5.79
0 - 1	2 - 2	3 - 5	6 - 8	9 - 11	12 - 14	15 - 17	18 - 21	22 - 24	25 - 32	Physical	12.28	6.15
0 - 0	1 - 4	5 - 8	9 - 12	13 - 16	17 - 20	21 - 24	25 - 28	29 - 32		Social Support	17.27	7.91
0 - 4	5 - 7	8 - 10	11 - 13	14 - 15	16 - 18	19 - 21	22 - 24	25 - 26	27 - 32	Self-Regulation	16.37	5.47
0 - 4	5 - 7	8 - 9	10 - 12	13 - 15	16 - 17	18 - 20	21 - 23	24 - 25	26 - 32	Problem Solving	15.65	5.42
0 - 3	4 - 5	6 - 8	9 - 10	11 - 12	13 - 15	16 - 17	18 - 19	20 - 22	23 - 32	Distraction	13.38	4.72
0 - 7	8 - 9	10 - 12	13 - 15	16 - 18	19 - 21	22 - 23	24 - 26	27 - 29	30 - 32	Health	18.80	5.56
0 - 4	5 - 7	8 - 10	11 - 12	13 - 15	16 - 18	19 - 21	22 - 23	24 - 26	27 - 32	Procrastination	16.09	5.59
0 - 11	12 - 13	14 - 15	16 - 17	18 - 19	20 - 21	22 - 23	24 - 24	25 - 26	27 - 32	Perfectionism	19.73	3.82
0 - 1	2 - 3	4 - 6	7 - 10	11 - 14	15 - 17	18 - 21	22 - 25	26 - 29	30 - 32	Self-Esteem	14.76	7.39
0 - 3	4 - 6	7 - 9	10 - 12	13 - 15	16 - 18	19 - 21	22 - 24	25 - 28	29 - 32	Depression	16.20	6.17
0 - 0	1 - 3	4 - 7	8 - 10	11 - 14	15 - 17	18 - 21	22 - 24	25 - 28	29 - 32	Anxiety	14.70	6.99
1	2	3	4	5	6	7	8	9	10			

Table 3: SAQ Norms for Women (n = 500)

1	2	3	4	5	6	7	8	9	10	Scale	Mean	SD
0 - 6	7 - 9	10 - 11	12 - 14	15 - 16	17 - 19	20 - 21	22 - 24	25 - 26	27 - 32	Work	17.15	5.05
0 - 0	1 - 3	4 - 7	8 - 10	11 - 13	14 - 16	17 - 19	20 - 22	23 - 25	26 - 32	Relationship	13.58	6.06
0 - 1	2 - 3	4 - 6	7 - 9	10 - 13	14 - 16	17 - 19	20 - 23	24 - 26	27 - 32	Parenting	13.74	6.67
0 - 2	3 - 5	6 - 8	9 - 11	12 - 15	16 - 18	19 - 21	22 - 24	25 - 27	28 - 32	Emotional	15.58	6.40
0 - 4	5 - 7	8 - 9	10 - 12	13 - 15	16 - 18	19 - 21	22 - 24	25 - 26	27 - 32	Behavioural	16.12	5.68
0 - 1	2 - 4	5 - 7	8 - 10	11 - 13	14 - 15	16 - 18	19 - 21	22 - 24	25 - 32	Physical	13.56	5.73
0 - 2	3 - 6	7 - 10	11 - 14	15 - 17	18 - 21	22 - 25	26 - 29	30 - 32		Social Support	18.49	7.95
0 - 3	4 - 5	6 - 8	9 - 11	12 - 13	14 - 16	17 - 19	20 - 21	22 - 24	25 - 32	Self-Regulation	14.22	5.36
0 - 5	6 - 8	9 - 10	11 - 13	14 - 15	16 - 18	19 - 20	21 - 23	24 - 25	26 - 32	Problem Solving	16.18	5.02
0 - 4	5 - 6	7 - 9	10 - 11	12 - 13	14 - 16	17 - 18	19 - 20	21 - 23	24 - 32	Distraction	14.38	4.71
0 - 7	8 - 10	11 - 12	13 - 15	16 - 17	18 - 20	21 - 22	23 - 25	26 - 28	29 - 32	Health	18.29	5.17
0 - 5	6 - 7	8 - 10	11 - 13	14 - 15	16 - 18	19 - 21	22 - 23	24 - 26	27 - 32	Procrastination	16.43	5.37
0 - 11	12 - 13	14 - 15	16 - 17	18 - 19	20 - 21	22 - 23	24 - 25	26 - 27	28 - 32	Perfectionism	20.04	3.80
0 - 1	2 - 5	6 - 8	9 - 12	13 - 15	16 - 19	20 - 23	24 - 26	27 - 30	31 - 32	Self-Esteem	16.44	7.14
0 - 6	7 - 9	10 - 11	12 - 14	15 - 17	18 - 20	21 - 22	23 - 25	26 - 28	29 - 32	Depression	17.83	5.54
0 - 2	3 - 5	6 - 9	10 - 12	13 - 15	16 - 18	19 - 21	22 - 25	26 - 28	29 - 32	Anxiety	16.00	6.45
1	2	3	4	5	6	7	8	9	10			

Gender and Age Differences

Table 4 shows the correlations between stress, age and gender and Tables 5 and 6 show the differences in mean scores. Although the magnitude of these differences is often quite small, they do reach statistical significance due to the large sample size.

- **Sources of Stress.** There are no significant differences between men and women on job and relationship satisfaction in the norms. There is, however, a significant difference in satisfaction on parenting - women tend to be more dissatisfied with their parental role. There are significant differences related to age. Older people tend to be more satisfied with their job and parental roles but more dissatisfied with their relationship.
- **Symptoms of Stress.** There are significant differences related to gender and age across the symptoms' scales. Women and younger people exhibit higher levels of emotional, behavioural and physical stress symptoms.
- **Coping Style.** Women tend to use social support networks and distraction more than men, but have more difficulty controlling their feelings and emotions. Older people tend to cope on their own more often, tend to be better at controlling their feelings and emotions and tend to be more active in trying to resolve problems and reduce stress.
- **Personality.** There are no significant differences between men and women in scores on Procrastination and Perfectionism. Consistent with the age difference in the Problem Solving Scale, older people tend to procrastinate less than young people.
- **Mental Health.** Differences in levels of self-esteem and depressive and anxiety symptoms replicate the differences reported for the symptoms' scales. Women and younger people show higher levels of anxiety and depression and lower self-esteem. These differences are consistent with those reported by Costa and McCrae (1991) for Neuroticism.

Table 4: Correlations of SAQ Scores with Age and Gender (n=1,000)

	Age	Sig	Gender	Sig
Work	-0.10	0.00	0.04	0.17
Relationship	0.12	0.00	0.01	0.72
Parenting	-0.12	0.01	0.19	0.00
Emotional	-0.16	0.00	0.20	0.00
Behavioural	-0.08	0.01	0.14	0.00
Physical	-0.09	0.00	0.11	0.00
Social Support	-0.09	0.01	0.08	0.01
Self-Regulation	0.20	0.00	-0.19	0.00
Problem Solving	0.15	0.00	0.05	0.11
Distraction	-0.02	0.51	0.11	0.00
Health	0.02	0.48	-0.05	0.13
Procrastination	-0.19	0.00	0.03	0.33
Perfectionism	0.03	0.27	0.04	0.19
Self-Esteem	-0.14	0.00	0.11	0.00
Depression	-0.18	0.00	0.14	0.00
Anxiety	-0.17	0.00	0.10	0.00

Table 5: SAQ Raw Scores by Age (n=1,000)

	21-24 (n=231)		25-44 (n=595)		45-64 (n=174)		Sig.	Combined (n=1,000)	
	Mean	SD	Mean	SD	Mean	SD		Mean	SD
Work	16.87	4.64	17.26	5.20	15.91	5.43	0.01	16.93	5.14
Relationship	11.58	6.35	13.74	6.01	14.19	6.36	0.00	13.50	6.19
Parenting	13.57	6.55	13.08	6.68	11.23	6.76	0.02	12.56	6.74
Emotional	14.79	7.15	14.76	6.56	11.71	5.95	0.00	14.24	6.70
Behavioural	15.14	6.02	15.81	5.61	13.98	5.87	0.00	15.34	5.79
Physical	13.06	6.34	13.18	5.84	11.81	5.84	0.03	12.92	5.98
Social Support	13.06	6.34	13.18	5.84	11.81	5.84	0.11	17.88	7.95
Self-Regulation	14.62	5.85	14.88	5.24	17.63	5.39	0.00	15.30	5.52
Problem Solving	15.16	5.30	15.72	5.14	17.59	5.12	0.00	15.92	5.23
Distraction	14.23	4.82	13.69	4.70	14.07	4.74	0.28	13.88	4.74
Health	19.18	5.63	18.02	5.20	19.49	5.41	0.00	18.55	5.37
Procrastination	17.16	5.45	16.58	5.36	14.01	5.38	0.00	16.26	5.48
Perfectionism	19.83	3.98	19.80	3.80	20.27	3.62	0.34	19.89	3.81
Self-Esteem	15.75	7.32	16.28	7.25	13.07	6.97	0.00	15.60	7.31
Depression	17.48	6.36	17.53	5.57	14.66	5.91	0.00	17.02	5.91
Anxiety	15.81	7.09	15.97	6.52	12.64	6.47	0.00	15.35	6.75

Table 6: SAQ Means and Standard Deviations of Men and Women (n=1,000)

	Men		Women		Sig.	Combined	
	Mean	SD	Mean	SD		Mean	SD
Work	16.71	5.22	17.15	5.05	0.17	16.93	5.14
Relationship	13.42	6.33	13.58	6.06	0.74	13.50	6.19
Parenting	11.29	6.60	13.74	6.67	0.00	12.56	6.74
Emotional	12.89	6.73	15.58	6.40	0.00	14.24	6.70
Behavioural	14.55	5.79	16.12	5.68	0.00	15.34	5.79
Physical	12.28	6.15	13.56	5.73	0.00	12.92	5.98
Social Support	17.27	7.91	18.49	7.95	0.01	17.88	7.95
Self-Regulation	16.37	5.47	14.22	5.36	0.00	15.30	5.52
Problem Solving	15.65	5.42	16.18	5.02	0.11	15.92	5.23
Distraction	13.38	4.72	14.38	4.71	0.00	13.88	4.74
Health	18.80	5.56	18.29	5.17	0.13	18.55	5.37
Procrastination	16.09	5.59	16.43	5.37	0.33	16.26	5.48
Perfectionism	19.73	3.82	20.04	3.80	0.19	19.89	3.81
Self-Esteem	14.76	7.39	16.44	7.14	0.00	15.60	7.31
Depression	16.20	6.17	17.83	5.54	0.00	17.02	5.91
Anxiety	14.70	6.99	16.00	6.45	0.00	15.35	6.75

5. Reliability and Validity

Table 7 presents internal consistency estimates based on Cronbach's coefficient alpha together with raw and sten score SEMs for the SAQ. High reliability is an important consideration and reliabilities in the range 0.6 to 0.8 are generally considered acceptable for a psychometric scale. Overall, the SAQ has good internal consistency reliability with a median scale reliability of 0.80.

- **Sources Stress.** The scale reliabilities range from 0.61 to 0.85.
- **Symptoms of Stress.** Scale reliabilities range from 0.76 to 0.84.
- **Coping Style.** Scale reliabilities range from 0.63 to 0.94.
- **Personality.** The procrastination scale reliability is 0.78 and the perfectionism scale reliability is 0.60.
- **Mental Health.** Trait scale reliabilities range from 0.67 to 0.82.

The Standard Error of Measurement (SEM) provides an error band around a score. There is a 68% chance that a person's true score on a trait will be within one SEM of the observed score and the person's real score will fall outside a two SEM band only 5% of the time.

The SAQ scale SEMs range from 1.97 to 3.81 with a mean SEM of 2.75. The Sten score SEM for all the scales is around one except the social support scale where it is 0.49. In other words, there is a 68% likelihood that the person's true score on one of the trait scales will lie 1 Sten either side of the observed score. This is the band of error around scores shown on the profile chart. There should be two stens difference between scores of two people on the same scale before it can be said that there is a reliable difference on that characteristic – for example, John is more likely to adopt a social support coping style than Jim.

Table 7: Internal Consistency Reliabilities for SAQ (n = 1,000)

	alpha	mean	sd	raw score	sten score
				SEm	SEm
Work	0.61	16.93	4.95	3.09	1.22
Relationship	0.81	13.50	6.5	2.83	0.85
Parenting	0.85	12.56	6.69	2.59	0.78
Emotional	0.84	14.24	6.58	2.63	0.80
Behavioural	0.80	15.34	5.81	2.60	0.90
Physical	0.76	12.92	5.97	2.92	0.97
Social Support	0.94	17.88	8.03	1.97	0.49
Self-Regulation	0.80	15.30	5.48	2.45	0.89
Problem Solving	0.79	15.92	5.31	2.43	0.90
Distraction	0.63	13.88	4.75	2.89	1.20
Health	0.68	18.55	5.34	3.02	1.11
Procrastination	0.78	16.26	5.52	2.59	0.95
Perfectionism	0.60	19.89	3.82	2.70	1.34
Self-Esteem	0.82	15.60	7.41	3.14	0.86
Depression	0.84	17.02	5.99	2.40	0.79
Anxiety	0.67	15.35	6.63	3.81	1.17

SAQ Scale Intercorrelations

Table 8 shows the intercorrelations of the SAQ scales. The strongest correlations are, generally, within each of the scale groupings.

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. Intercorrelations for unreliability show how effectively a questionnaire differentiates between the constructs it is designed to measure.

Less than 50% shared by any two scales is a good indicator that the scales are measuring different things whereas a figure of over 100% suggests that the scales are measuring the same thing. Table 9 shows the percentage of common reliable variance for the SAQ scales and reveals the following pattern of relationships.

- **Sources of Stress.** The scales show a very good degree of independence with less than 10% common variance.
- **Symptoms of Stress.** These scales are very closely related. They seem to be measuring the same thing and the categorisation of symptoms into three scales may be somewhat artificial.
- **Coping Style.** All the scale pairs bar one have less than 50% common variance – Distraction and Problem Solving share 51% common variance. This suggests that the scales are measuring different coping styles.
- **Personality.** Procrastination and Perfectionism share 58% of common variance – some degree of independence.
- **Mental Health.** Scale pairs have significantly more than 50% common variance revealing a high degree of overlap between symptoms of low self-esteem, depression and anxiety. There is a very high degree of overlap between the mental health scales and the stress symptoms scales. For example the Anxiety scale and Emotional Symptoms scales are perfectly related as are the Self-Esteem scale and the Behavioural symptoms scale.

Table 8: Intercorrelations of SAQ scales (n=1,000)

	Work	Relationship	Parenting	Emotional	Behavioural	Physical	Social Support	Self-Regulation	Problem Solving	Distraction	Health	Procrastination	Perfectionism	Self-Esteem	Depression	Anxiety
Work	1.00	0.16	0.21	0.38	0.41	0.27	-0.32	-0.29	-0.14	-0.18	-0.29	0.32	-0.14	0.46	0.41	0.39
Relationship		1.00	0.24	0.26	0.40	0.23	-0.36	-0.22	-0.18	-0.10	-0.22	0.27	-0.18	0.33	0.36	0.27
Parenting			1.00	0.30	0.33	0.26	-0.25	-0.33	-0.20	-0.08	-0.28	0.27	-0.17	0.37	0.35	0.31
Emotional				1.00	0.72	0.74	-0.26	-0.56	-0.09	0.00	-0.47	0.36	-0.24	0.65	0.72	0.88
Behavioural					1.00	0.61	-0.31	-0.51	-0.19	-0.06	-0.47	0.57	-0.40	0.69	0.73	0.72
Physical						1.00	-0.15	-0.43	-0.13	0.07	-0.55	0.28	-0.26	0.46	0.55	0.70
Social Support							1.00	0.29	0.27	0.37	0.24	-0.22	0.14	-0.44	-0.41	-0.29
Self-Regulation								1.00	0.51	0.23	0.44	-0.33	0.19	-0.57	-0.59	-0.51
Problem Solving									1.00	0.51	0.31	-0.34	0.25	-0.36	-0.34	-0.11
Distraction										1.00	0.18	-0.21	0.04	-0.24	-0.20	-0.01
Health											1.00	-0.35	0.22	-0.49	-0.53	-0.44
Procrastination												1.00	-0.48	0.53	0.58	0.40
Perfectionism													1.00	-0.27	-0.31	-0.25
Self-Esteem														1.00	0.77	0.67
Depression															1.00	0.74
Anxiety																1.00

Table 9: Percentage of Common Reliable Variance for SAQ scales (n=1,000)

	Relationship	Parenting	Emotional	Behavioural	Physical	Social Support	Self-Regulation	Problem Solving	Distraction	Health	Procrastination	Perfectionism	Self-Esteem	Depression	Anxiety
Work	6%	6%	17%	22%	12%	13%	11%	3%	6%	20%	20%	5%	45%	23%	23%
Relationship		8%	8%	20%	8%	17%	6%	5%	2%	11%	14%	8%	23%	17%	11%
Parenting			11%	14%	10%	8%	14%	6%	1%	19%	14%	8%	29%	17%	14%
Emotional				68%	84%	9%	41%	1%	0%	52%	25%	14%	92%	70%	114%
Behavioural					58%	13%	34%	6%	1%	54%	65%	41%	101%	70%	77%
Physical						3%	24%	3%	1%	72%	16%	17%	45%	40%	72%
Social Support							11%	11%	26%	14%	10%	5%	42%	23%	13%
Self-Regulation								41%	10%	47%	21%	9%	70%	46%	38%
Problem Solving									51%	24%	23%	15%	28%	15%	2%
Distraction										8%	9%	0%	13%	5%	0%
Health											24%	13%	51%	38%	28%
Procrastination												58%	61%	45%	23%
Perfectionism													16%	13%	9%
Self-Esteem														80%	66%
Depression															80%
Anxiety															

These findings can be summarised as follows. At the construct level, the SAQ questionnaire differentiates effectively between the constructs of sources of stress, symptoms of stress, coping style and personality. Where the questionnaire does not differentiate is between scales designed to measure short-term symptoms of stress and scales designed to measure mild to moderate symptoms of anxiety and depression. At the scale level, there is a mixed pattern. There is reasonable to good differentiation within the sources of stress scales, the coping style scales and the personality scales but very little differentiation within the symptoms of stress scales and the mental health scales.

Standard Error of Difference

The SEd gives an indication of what constitutes a real difference between a person's scores on any pair of scales. The SEd depends on the reliability of the scales – the higher the reliability the smaller the SEd is. If there are two full SEd between the scores on two scales, then there is a 95% likelihood that there is a real difference.

The SEd for the scales are generally around 1.5 with higher and lower ones reflecting the differences in reliabilities (Table 10). You need to see a difference of 3 Stens or more before you can infer that the client has more of one characteristic than the other – for example, John has more anxiety symptoms than depressive ones.

Table 10: SEd of SAQ scales (n=1,000)

	Relationship	Parenting	Emotional	Behavioural	Physical	Social Support	Self-Regulation	Problem Solving	Distraction	Health	Procrastination	Perfectionism	Self-Esteem	Depression	Anxiety
Work	1.49	1.45	1.46	1.52	1.56	1.32	1.51	1.52	1.71	1.65	1.54	1.81	1.49	1.46	1.69
Relationship		1.16	1.17	1.24	1.29	0.98	1.23	1.24	1.47	1.40	1.27	1.58	1.21	1.16	1.45
Parenting			1.12	1.19	1.25	0.93	1.19	1.19	1.43	1.36	1.23	1.55	1.16	1.12	1.41
Emotional				1.21	1.26	0.94	1.20	1.21	1.44	1.37	1.24	1.56	1.18	1.13	1.42
Behavioural					1.32	1.02	1.26	1.27	1.50	1.43	1.30	1.61	1.24	1.20	1.48
Physical						1.09	1.32	1.33	1.54	1.48	1.36	1.65	1.30	1.26	1.53
Social Support							1.02	1.03	1.29	1.22	1.07	1.42	0.99	0.93	1.27
Self-Regulation								1.27	1.49	1.43	1.30	1.61	1.24	1.19	1.47
Problem Solving									1.50	1.43	1.31	1.61	1.25	1.20	1.48
Distraction										1.63	1.52	1.79	1.47	1.44	1.68
Health											1.46	1.74	1.41	1.37	1.62
Procrastination												1.64	1.28	1.23	1.51
Perfectionism													1.59	1.55	1.78
Self-Esteem														1.17	1.46
Depression															1.42
Anxiety															

Factor Analysis of SAQ

Principal Components extraction with oblique rotation was performed on the SAQ scales on a subset of the norms sample of 1,000 respondents – that is, 421 individuals who had a partner and parental responsibilities. The remainder of the sample was treated as missing cases because they had not responded to the scales measuring the individual's satisfaction with their relationship and parental role. We decided to use oblique rotation because many correlations in the factor correlation matrix exceeded 0.30.

The Kaiser-Meyer-Olkin Measure of Sampling Adequacy was 0.91, well above 0.6 required for a good factor analysis. Three factors were extracted with eigenvalues of 1 accounting for 63% of the variance (Figure 2). The variables were moderately well-defined by the factor solution. Communality values ranged from 0.34 to 0.83 with a median value of 0.68. With a cut-off of 0.45 for the inclusion of a scale in the interpretation of a factor, all the scales loaded on one and only one of the three factors.

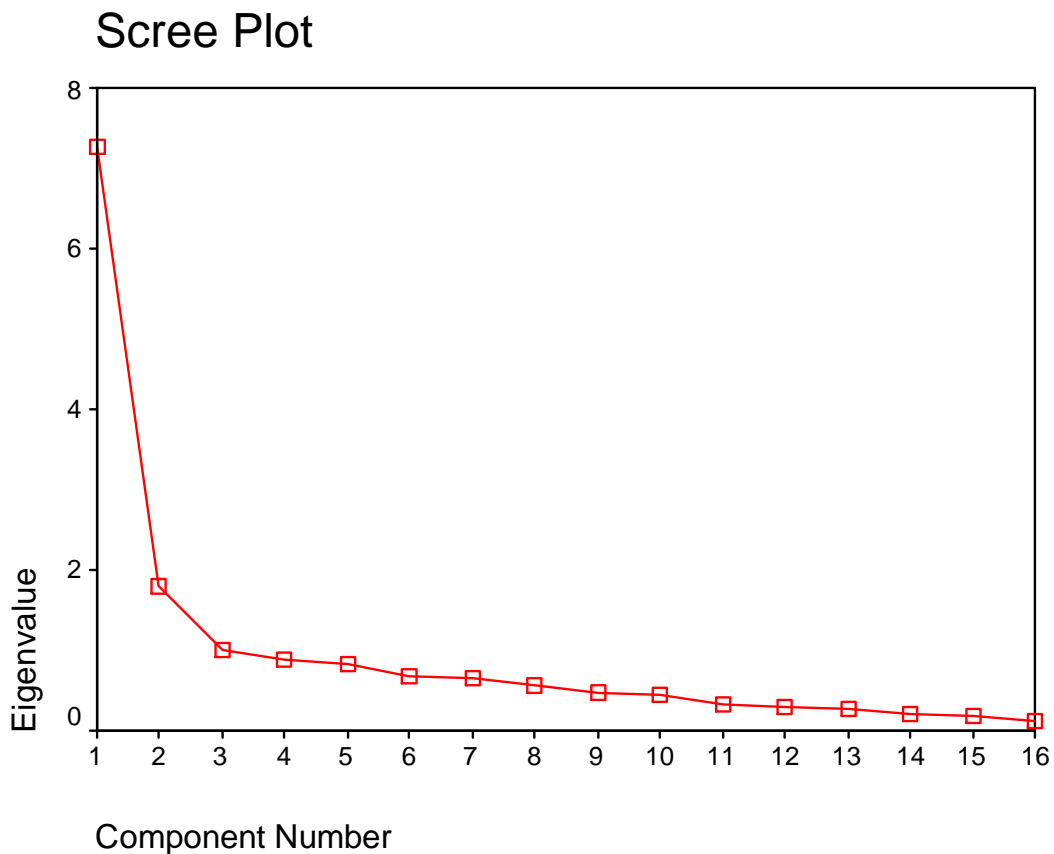


Figure 2: Scree Plot of SAQ

Table 11 shows the factor structure of the questionnaire. The first factor in the solution is made up of a large number of the scales comprising the three symptoms scales, the three mental health scales, two of the coping style scales and the three sources of stress scales. This seems to be a generalised measure of the individual's experience of stress. The second factor provides a measure of the individual's coping style made of the distraction, problem solving and social support. The third factor covers the two personality factors of procrastination and perfectionism.

Table 11: Factor Structure of SAQ Scales (n=421)

	Factor			
	1	2	3	
Emotional Symptoms	0.93			Generalised Stress
Anxiety Symptoms	0.90			
Depressive Symptoms	0.87			
Low Self-Esteem Symptoms	0.82			
Behavioural Symptoms	0.80			
Physical Symptoms	0.77			
Health Coping Style	-0.63			
Self-Regulation Coping Style	-0.60			
Parenting Dissatisfaction	0.60			
Job Dissatisfaction	0.55			
Relationship Dissatisfaction	0.55			
Distraction Coping Style		0.84		Coping
Problem Solving Coping Style		0.77		
Social Support Coping Style		0.48		
Perfectionism			0.85	Perfectionism
Procrastination			-0.52	

Extraction Method: Principal Component Analysis. Rotation Method: Oblimin with Kaiser Normalization. Loadings below 0.45 omitted

Table 12 shows that there are some but not large correlations between the derived factors in the direction that might be expected. Stress symptoms are negatively related to a positive coping style and perfectionism/procrastination. At its simplest, the factor analysis can be interpreted as evidence that people who get on with things suffer less stress.

Table 12: Intercorrelations of SAQ Oblique Factors

Factor	Stress	Coping Style	Perfectionism
Stress	1.00	-0.25	-0.30
Coping Style	-0.25	1.00	-0.01
Perfectionism	-0.30	-0.01	1.00

Relationship of SAQ Scales to IPIP Marker Variables

Table 13 describes the relationship between a number of SAQ scales and marker variables from the IPIP item pool (IPIP, 2001). These scales show very high correlations supporting the construct validity of the SAQ. We can be reasonably certain that the SAQ scales in Table 13 are measuring the same thing as scales with similar labels in the NEO and 16PF.

Table 13: Correlations between SAQ Scales and IPIP Marker Variables

SAQ Scale	IPIP Markers
Self-Regulation	0.81
Procrastination	0.80
Perfectionism	0.70
Self-Esteem	0.91
Depression	0.86
Anxiety	0.83

Criterion Validity

In order to assess the criterion-related validity of the SAQ, we carried out an analysis of correlations between the SAQ factors and the Holmes-Rahe scale score. The Holmes-Rahe scale provides an indication of the degree of stress experienced based on exposure to critical life incidents – for example, separation, bereavement etc. Table 14 shows a significant correlation at the 0.3 level between the SAQ generalised stress symptoms factor and the Holmes-Rahe scale score, and correlations at around 0.2 with the individual SAQ symptoms and mental health scales.

Table 14: Correlations Between SAQ and Holmes-Rahe Scale

	Holmes-Rahe	N
Stress	0.29**	1,000
Coping	0.01	669
Perfectionism	0.03	471
Work	0.18**	1,000
Relationship	0.22**	1,000
Parenting	0.12*	1,000
Emotional	0.23**	1,000
Behavioural	0.22**	1,000
Physical	0.22**	1,000
Social Support	-0.15**	1,000
Self-Regulation	-0.16**	1,000
Problem Solving	-0.02	1,000
Distraction	-0.02	1,000
Health	-0.22	1,000
Procrastination	0.09**	1,000
Perfectionism	0.02	1,000
Self-Esteem	0.19**	1,000
Depression	0.22**	1,000
Anxiety	0.21**	1,000

Significant at 1% level

References

- Bartram, D. (1998). EFPA review model for the description and evaluation of psychological tests. Notes for reviewers.
- Bernstein, D. A. & Carlson, C. R. (1993). Progressive relaxation: abbreviated methods. In P. M. Lehrer & R. L. Woodfolk (Eds.), *Principles of stress management* (2nd ed.). New York: Guilford Press.
- Bunce, D. (1997). What factors are associated with the outcome of individual-focused worksite stress management interventions? *Journal of Occupational and Organizational Psychology*, 70, 1-17.
- Cooper, C. L. & Marshall, J. (1976). Occupational sources of stress: a review of the literature relating to coronary heart disease and mental ill health. *Journal of Occupational Psychology*, 49, 11-28.
- Cooper, C. L. & Payne, R. (1991). *Personality and stress: individual differences in the stress process*. John Wiley & Sons Ltd.
- Cooper, C. L. (1983). Identifying stressors at work: recent research developments. *Journal of Psychosomatic Research*, 27, 369-376.
- 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.
- Cox, T. (1987). Stress, coping and problem solving. *Work & Stress*, 1, 5-14.
- Dewe, P. (1994). EAP's and stress management: from theory to practice to comprehensiveness. *Personnel Review*, 23, 21-32.
- Dryson, E. W., Scragg, R. K., Metcalf, P. A. & Baker J. R. (1996). Stress at work: an evaluation of occupational stressors as reported by a multi-cultural New Zealand workforce. *International Journal of Occupational Health*, 2, 18-25.
- Elkin, A. (1999). *Stress management for dummies*. IDG Books, Worldwide, Inc.
- Espie C. A . (1993). *Practical management of insomnia: behavioural and cognitive techniques*. (ABC of Sleep Disorders)
- Ferner, J. D. (1980). *Successful time management*. New York: Wiley, p. 12.
- Fontana, D. (1989). *Managing stress*. Routledge, Ltd.
- Holmes, T. H. & Rahe, R. H. (1967). The social readjustment rating scale. *Journal of Psychometric Research*, 11, 213-218.

- Hurrell, J. J. (1989). An overview of organisational stress and health. In L. R. Murphy & T. F. Schoenborn (Eds.) *Stress management in work settings*. Praeger: New York.
- International Personality Item Pool (2001). A Scientific Collaboratory for the Development of Advanced Measures of Personality Traits and Other Individual Differences (<http://ipip.ori.org/>). Internet Web Site.
- Karaseck, R. A. (1979). Job demands, decision latitude, and mental strain: implications for job redesign. *Administrative Quarterly*, 24, 295-307.
- McDerment, L. (1988). *Stress care*. SCA Eduaction.
- McHugh, M. & Brennan, S. (1993). Managing work stress: a key issue for all organizations. *Employee Counselling Today*, 5, 16-21.
- Murphy, L. R. & Schoenborn T. F. (1989). *Stress management in work settings*. Praeger: New York.
- Murphy, L. R. (1988). Workplace interventions for stress reduction and prevention. In C. L. Cooper & R. Payne (Eds.) *Causes, coping and consequences of stress at work*. John Wiley & Sons, Chichester.
- Occupational Safety and Health Service. (1998). *Stress and fatigue: their impact on health and safety in the workplace*. Department of Labour.
- Peiffer, V. (1996). *Stress Management*. Thorsons.
- Report for Nutrition Taskforce. (1991). *Food for Health*. Department of Health
- Reynolds, S. (2000). Interventions: what works, what doesn't? *Occupational Medicine*, 50, 315-319.
- Rice, P. L. (1987). *Stress and health: principles and practice for coping and wellness*. California Brooks and Cole Publishing Company.
- Romas, J. A. & Sharma, M. (2000). *Practical stress management: a comprehensive workbook* Lazarus, R. S. & Folkman, S. (1984). *Stress, appraisal, and coping*. Springer Publishing Company, New York.
- Seyle, H. (1974). *The stress of life*. New York: McGraw-Hill.
- Smith, J. C. (1993). *Understanding stress and coping*. New York: MacMillan.
- Shapiro, C. M. & Flanigan, M. J. (1993). Functions of sleep. *British Medical Journal*, 306, 383-385.
- Van der Hek, H. & Plomp, H. N. (1997). Occupational stress management programmes: a practical overview of published effect studies. *Occupational Medicine*, 47, 133-141.

