Measuring emotional intelligence (EQ): a construct comparison between the Bar-On EQ-i and the OPQ32i EI report

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Recently, there has been increasing interest in the role of emotions in organisational life. Consequently, there is also widespread interest in the topic of emotional intelligence and its predictive validity for work performance. In researching the construct of emotional intelligence, it is of prime importance to investigate the measurement of the construct. The Bar-On Emotional Quotient Inventory (Bar-On EQ-i) is the world's first scientifically developed and validated measure of emotional intelligence (EQ) that has been made available commercially, and at the time of this study is regarded as the benchmark in the measurement of emotional intelligence. The Occupational Personality Questionnaire (OPQ32i) is a competency-based personality questionnaire used in recruitment and development environments. Both these instruments generate EQ reports and seemingly represent different views on EQ. Apart from its focus on the uniqueness of both approaches to EQ and its measurement, this study also explores the degree of the construct correlation between the two instruments. This is an exploratory study, and data were obtained from a total population of 38 sales managers in the South African financial services industry. The results indicate significant construct overlap and correlations between, firstly, the Bar-On EQ-i and the OPQ32i, and secondly, between the Bar-On EQ-i and OPQ32i Emotional Intelligence reports.

Introduction

Recently, a renewed recognition of the role of feelings and emotions in organisational life has emerged (Muchinsky 2000). A number of authors have emphasised the importance of understanding and managing the impact of emotions and related behaviours in terms of organisational success (Fischer & Ashkanasy 2000; Higgs 2001). Corporate interest appears to be strongly related to the continuing search for a way of securing a sustainable competitive advantage (Dulewicz & Higgs 2000). Emotional intelligence is one of the concepts that has received widespread interest in terms of its contribution to organisational effectiveness.

The term 'emotional intelligence' arose from the assumption that factors other than cognitive intelligence contribute to success or the achievement of personal goals (Bar-On 1988). The American psychologist Edward Thorndike (1920) was one of the first to identify the concept of emotional intelligence when he talked about 'social intelligence'. He argued that personal or social intelligence is distinct from academic abilities, and plays a central role in determining how well individuals deal with the practicalities of life. Later, David Wechsler (1943), one of the originators of IQ testing, recognised the importance of 'emotional factors', and argued that the 'non-intellective aspects of general intelligence' should be included in any 'complete measurement'. He defined intelligence as ''the aggregate or global capacity of the individual to act purposefully, to think rationally, and to deal effectively with his (or her) environment'' (Wechsler 1958). In 1948, another American researcher, R.W. Leeper, argued for the idea of 'emotional thought', which he believed contributed to 'logical thought' (Stein & Book 2000). In 1955, Albert Ellis introduced Rational Emotive Therapy – a process that involved taking cognisance of emotions in a logical, thoughtful way (Stein & Book 2000). Then in 1983, Howard Gardner at Harvard University explored the possibility of 'multiple intelligences' and included what he called 'intrapsychic capacities', which in essence amounts to an aptitude for introspection or intrapersonal awareness, and 'personal intelligence'. Sternberg (1985) followed this trend, focusing specifically on

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the existence of a personal or emotional intelligence, and recognised the multi-dimensionality of intelligence. He proposed that intelligent behaviour entails processes and components that occur at different levels.

Salovey & Mayer (1990) coined the term 'emotional intelligence'. They defined emotional intelligence as the ability to perceive emotions, to access and generate emotions so as to assist thought, to understand emotions and emotional meanings, and to regulate emotions reflectively in ways that promote emotional and intellectual growth. They developed an ability model of emotional intelligence and consequently describe it as the ability to reason with and about emotions. This ability model of emotional intelligence is considered the most well clarified theoretically (Palmer, Walls, Burgess & Stough 2001).

In 1995, Daniel Goleman's *Emotional Intelligence: Why it can Matter more than IQ*, generated a flood of interest in the role that emotional intelligence plays in our lives, and effectively propelled the concept of emotional intelligence (EQ) into the public domain in a coherent and accessible way. Goleman (1995) adapted the model of Salovey & Mayer (1990) to explore how emotional intelligence relates to working life. His model splits emotional intelligence into the two broad categories of personal and social competence. It is thus a competence model, and Cherniss & Goleman (2001) argue that emotional competencies are job skills that can, and indeed must, be learnt. Emotional competence is defined as a learnt capability based on emotional intelligence that results in outstanding performance at work. Goleman's framework of emotional competence is set out in Table 1.

Dr Reuven Bar-On also investigated and defined emotional intelligence from a competency model perspective. According to Bar-On (1996b), emotional intelligence is defined as the array of personal, emotional and social abilities and skills that influence one's ability to succeed in coping with environmental demands and pressures. He identified five major conceptual components of emotional and social intelligence, which between them are comprised of 15 factors. These are outlined in Table 2.

Based on this framework, the Bar-On Emotional Quotient Inventory was developed. This inventory is arguably the first scientifically developed and validated measure of emotional intelligence. This inventory was commercialised in 1997, shortly after the appearance of Goleman's landmark publication (Goleman 1995), and is currently regarded as the benchmark instrument for measuring EQ. The respective composites and subscales of the Bar-On Emotional Quotient Inventory are illustrated in Figure 1.

Goleman's recent EI framework (Cherniss & Goleman 2001) elaborates on previous versions of his own framework. This altered model shows significant overlap when placed alongside the systematic view of Bar-On's EQ model – albeit after some re-notation and organisation of the scale hierarchy (see Table 2). This systematic view of Bar-On's model (Bar-On 1997a; 1997b) focuses on the arrangement of similar types of factors that logically and statistically fit together (that is 'interpersonal components' or 'intrapersonal components'). The

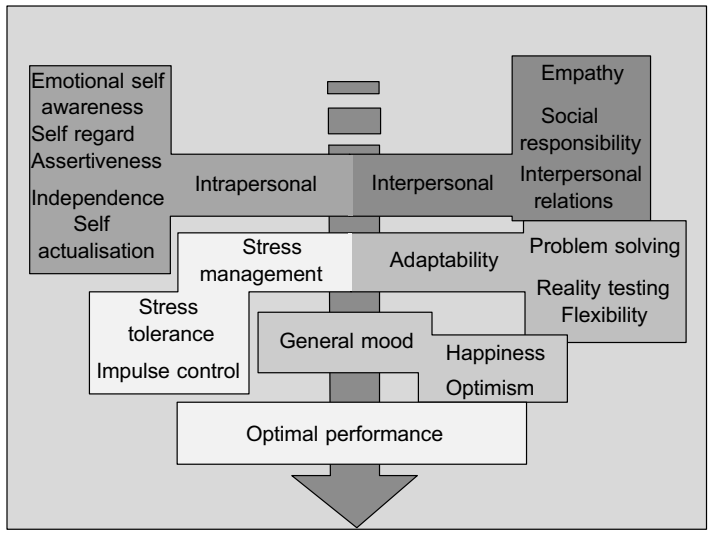

Figure 1: Bar-On EQ-i dimensions and subscales

Table 1: Golemans emotional competence framework

PERSONAL COMPETENCE: How we manage ourselves
A. SELF-AWARENESS
A1. *Emotional self-awareness:* Reading one's own emotions and recognising their impact; using 'gut sense' to guide decisions
A2. *Accurate self-assessment:* Knowing one's strengths and limits
A3. *Self-confidence:* A sound sense of one's self-worth and capabilities
B. SELF-MANAGEMENT/REGULATION
B1. *Emotional self-control:* Keeping disruptive emotions and impulses under control
B2. *Trustworthiness:* Maintaining standards of honesty and integrity
B3. *Conscientiousness:* Taking responsibility for personal performance
B4. *Adaptability:* Flexibility in adapting to changing situations or overcoming obstacles
B5. *Innovation:* Being comfortable with novel ideas, approaches and new information
C. MOTIVATION
C1. *Achievement drive:* The drive to improve performance to meet standards of excellence
C2. *Commitment:* Aligning with the goals of the group or the organisation
C3. *Initiative:* Readiness to act on opportunities
C4: *Optimism:* Persistence in pursuing goals despite obstacles and setbacks
SOCIAL COMPETENCE: How well we handle relationships
D. EMPATHY
D1. *Understanding others:* Sensing others' feelings and perspectives, and taking an active interest in their concerns
D2. *Developing others:* Sensing others' development needs, and bolstering their abilities
D3. *Service orientation:* Anticipating, recognising and meeting customer needs
D4. *Leveraging diversity:* Cultivating opportunities through different kinds of people
D5. *Political awareness:* Reading a group's emotional currents and power relationships
E. SOCIAL SKILLS/ RELATIONSHIP MANAGEMENT
E1. *Influence:* Wielding a range of tactics for persuasion
E2. *Communication:* Listening openly, and sending convincing messages
E3. *Conflict management:* Negotiating and resolving disagreements
E4. *Leadership:* Inspiring and guiding individuals and groups
E5. *Change catalyst:* Initiating or managing change
E6. *Building bonds:* Nurturing instrumental relationships
E7. *Collaboration and cooperation:* Working with others towards shared goals
E8. *Teamwork capabilities:* Creating group synergy in pursuing collective goals

reorganisation of the scales illustrates the content commonality between Bar-On's Emotional Quotient Inventory and Goleman's Emotional Competence Framework. However, it does not take cognisance of Bar-On's topographic approach (1997a; 1997b), which juxtaposes the factorial components of noncognitive intelligence according to a ranked order ranging from 'core (or primary) factors' to 'resultant (or higher order) factors', which are connected by a group of 'supporting (or secondary) factors' (as presented in Table 3). Core factors lead to resultant factors, which are both dependent upon the supporting factors, and include the respective weightings given to items in their loading on to domain scores.

Apart from the Bar-On Emotional Quotient Inventory (EQ-i^{TM}), several other assessments of emo-

Table 2: Bar-On emotional quotient inventory with Cherniss & Goleman notation

A. INTRAPERSONAL REALM (RA): Concerns what is generally referred to as the 'inner self'
A1. *Emotional Self-awareness:* The ability to recognise and understand one's feelings and emotions, differentiate between them, know what caused them and why.
A2 *Assertiveness. (Placed under domain B):* The ability to express feelings, beliefs and thoughts and defend one's rights in a non-destructive way.
A5. *Independence (Placed under domain E):* The ability to be self-reliant and self-directed in one's thinking and actions and to be free of emotional dependency.
A3. *Self regard:* The ability to look at and understand oneself, respect and accept oneself, accepting one's perceived positive and negative aspects as well as one's limitations and possibilities.
A4. *Self-actualisation (Placed under domain E):* The ability to realise one's potential capacities and to strive to do that which one wants to do and enjoys doing.
B. INTERPERSONAL REALM (ER): Concerns what is known as 'people skills'
B1. *Empathy:* The ability to be attentive to, to understand and to appreciate the feelings of others. It is being able to 'emotionally read' other people.
B3 *Interpersonal relations. (Placed in domain C):* The ability to establish and maintain mutually satisfying relationships that are characterised by intimacy and by giving and receiving affection.
B2 *Social responsibility. (Placed under domain A, B & C):* The ability to demonstrate oneself as a cooperative, contributing, and constructive member of one's social group.
C. ADAPTABILITY REALM (AR): Concerns the ability to size-up and respond to a wide range of difficult situations
C3. *Problem solving:* The ability to identify and define problems as well as to generate and implement potentially effective solutions.
C1. *Reality testing:* The ability to assess the correspondence between what is experienced (the subjective) and what in reality exists (the objective).
C2. *Flexibility:* The ability to adjust one's emotions, thoughts and behaviours to changing situations and conditions.
D. STRESS MANAGEMENT (SM): Concerns the ability to understand stress without caving in, falling apart, losing control or going under
D1. *Stress tolerance:* The ability to withstand adverse events and stressful situations without falling apart by actively and confidently coping with stress.
D2. *Impulse control (Under domain A):* The ability to resist or delay an impulse, drive or temptation to react.
E. GENERAL MOOD REALM (GM): Concerns one's outlook on life, the ability to enjoy oneself and others and one's overall feelings of contentment and satisfaction.
E2. *Happiness (Placed under domain D):* The ability to feel satisfied with one's life, to enjoy oneself and others, and to have fun.
E1. *Optimism:* The ability to look at the brighter side of life and to maintain a positive attitude even in the face of adversity.

Table 3: A topographic arrangement of the 15 factors of emotional intelligence measured by the Bar-On EQ-i

Core factors
Emotional self-awareness, Assertiveness, Empathy, Reality testing, Impulse control
Supporting factors
Self-regard, Independence, Social responsibility, Optimism, Flexibility, Stress tolerance
Resultant factors
Problem solving, Interpersonal relationships, Self-actualisation, Happiness

tional intelligence have entered the marketplace. Boyatzis, Goleman, Hay & McBer (in Dann 2001) developed the Emotional Competence Inventory (ECI). Others include the EQ Map™ from Advanced Intelligence Technologies and Essi Systems, Orioli, Sawaf and Cooper; the Emotional Intelligence Questionnaire (EIQ™) from Dulewicz & Higgs (2000), the Multifactor Emotional Intelligence Scale (MEIS™), and the Mayer, Salovey & Caroso EI Test (MSCEIT™) (Dann 2001).

All these measurements primarily assess emotional intelligence. Emotional intelligence reports are, however, also frequently generated as a second order application of a measurement. One such instrument that generates an EQ report is the OPQ32i, which is a competency-based personality questionnaire. The OPQ32 model is an occupational model of personality, which breaks personality down into three domains. These domains are Feelings and Emotions (FE), Thinking Style (TS) and Relationships with People (RP). Apart from a multitude of other second order applications (including team styles, reporting styles and leadership styles) this instrument also generates an emotional intelligence (EI) report. The OPQ32i EI reports on emotional intelligence on two domains and four subdomains, with the relevant OPQ scales loading on to each subdomain. The two umbrella domains are only descriptive and are not allocated scores, compared to the Bar-On EQ-i, where umbrella domains are allocated scores. The two domains are (1) Managing Feelings, which is concerned with how one manages thoughts, emotions and feelings; and (2) Managing Relationships, which is concerned with how one manages relationships with other people.

These two domains are each subdivided into two subscales. The two subscales that cluster under Managing Feelings are 'feelings and emotions' – how one handles one's feelings about oneself and others; and 'personal insight' – how well one understands one's feelings about oneself and others. The two subscales that cluster under Managing Relationships are 'empathy' – how one appreciates the perspectives of other people and how they feel or think about things, and 'social ease' – how flexible one's approach and style are to different work and social situations – as reported in Figure 2.

The OPQ32i EI report was developed on the basis of the theoretical model of Goleman and therefore shows significant construct commonality with Goleman's framework (1995). Although Goleman's Emotional Competence Framework (Cherniss &

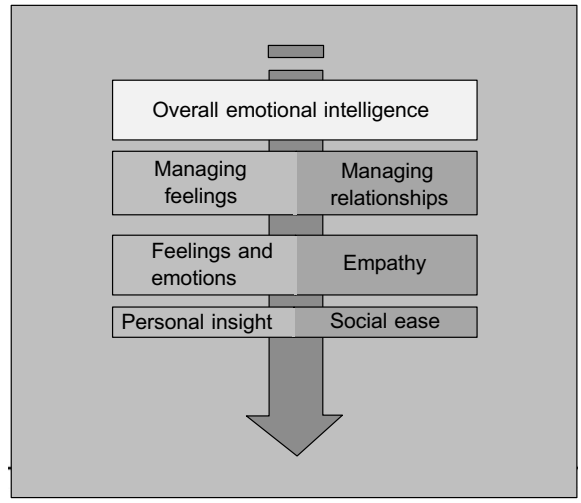

Figure 2: OPQ32i EI report – dimensions

Goleman 2001) has recently evolved quite significantly, the commonality is still evident. The two OPQ EI subscales under both the umbrella domains (Managing Feelings and Managing Relationships) correspond to Goleman's model and theory of EQ. 'Feelings and emotions' correspond to Goleman's 'self-awareness'; 'personal insight' corresponds to Goleman's 'self-management'; 'empathy' corresponds to Goleman's 'relation management'; and 'social ease' to Goleman's 'social skills' (see Table 1).

As mentioned earlier, there is renewed interest in the role of emotional intelligence in organisations and in the predictive validity of the construct for work performance. Law, Wong & Song (2004) confirm that emotional intelligence is a significant predictor of job performance. Stein & Book (2000) and the Irish Management Institute (2003) have shown that specific emotional intelligence subscales can be used for predicting the success of sales personnel. Although emotional intelligence is said to be based on extensive scientific and research evidence, little research has been conducted in the organisational context (Dulewicz & Higgs 2000). Both the Bar-On EQ-i and the OPQ32i are extensively used within the organisational context and also specifically for predicting job performance or sales success, as is the case with the sample used in this study. However, there has not yet been research by the developers of the product, or any other research in the South African environment, to explore the commonalities or differences between these two measurements. It is within this context that two EQ report outputs are scrutinised and compared.

Goleman's EQ model (2001) is based on a theory of performance in the world of work, and the

OPQ32i is a competency-based personality measurement specifically designed for the world of work. As indicated in the content overlay, the two models should have a similar vernacular in terms of workplace demands on personality and hence also on EQ. According to Bar-On, the factorial components of noncognitive intelligence resemble personality factors, and his model is also related to performance in the sense that it "relates to potential for performance, rather than performance itself (that is, the potential to succeed rather than success itself); it is process-oriented rather than outcome-oriented" (Bar-On 1996b). Thus, given their approaches to emotional intelligence from a personality and workplace performance perspective, both Goleman and Bar-On should have much in common with the OPQ32i – as we have consistently argued. However, Law, Wong & Song (2004) recently reported that emotional intelligence was related to, yet distinct from, personality dimensions.

This research therefore sets out to investigate the OPQ32i, the OPQ32i EI report and the Bar-On EQ-i models – what they, respectively, consider the constructs of EQ to be and the nature of the content commonality between the two models. In this regard, the supposed similarities between the Bar-On EQ-i dimensions and Goleman's Emotional Competency Framework have been indicated, as well as the similarities between the OPQ32i EI report and Goleman's Emotional Competency Framework. Since both these instruments seem to overlap to some extent with Goleman's Emotional Competency Framework, we expect that there will also be a great deal of overlap between the Bar-On EQ-i, the OPQ32i and the OPQ32i EI Report. Therefore, on an exploratory basis, this study investigates the degree and direction of the construct relationship between (1) the OPQ32i and Bar-On EQ-i and (2) between the OPQ32i EI report and the Bar-On EQ-i.

Method

Participants

The sample consists of the total population of 38 sales managers in the consultancy division of a blue chip financial services company. The mean age of the sample was 37, ranging from a minimum age of 29 to a maximum age of 49. Within the sample, 87% were males. The size of the sample limits the statistical procedures (in other words, the stepwise logistic regression) and is obviously restricting in terms of generalisation, but on an exploratory basis is sufficient to answer our research question, and give useful insights into the specific manager population.

Measuring instruments

The Bar-On EQ-i (Bar-On 1997a, 1997b) is the first empirically constructed test of emotional intelligence that has been made available commercially and is regarded as the premier measure of emotional intelligence available at the time of this study (Cherniss & Goleman 2001). This instrument generates a total EQ score – an indication of one's noncognitive ability to succeed in coping with environmental demands – and five EQ composite scores or meta-scales based on 15 subscale scores. The inventory has a large normative database of over 50 000 subjects, and it is of particular significance that data were obtained internationally in almost 20 countries, including South Africa. The Bar-On EQ-i is composed of 133 brief items and employs a five-point Likert response format ranging from 'Not true of me' to 'True of me.' It takes approximately 30 to 40 minutes to complete.

Two types of reliability studies were carried out on the Bar-On EQ-i, including internal consistency and retest reliability. Eight types of validity studies were conducted on the Bar-On EQ-i instrument, namely, content validity, face validity, factorial validity, construct validity, convergent validity, divergent validity, criterion group validity and predictive validity. Bar-On (1997a, 1997b) concluded that the Bar-On EQ-i is valid and capable of achieving the objectives for which it was designed. The EQ-i's construct validity has been examined in relation to ten other measures over a 12-year period (1985–1997) and is still continuing, however, not yet including the OPQ32i (Bar-On 1997a, 1997b).

The OPQ32 model (Saville & Holdsworth 1999) is an occupational model of personality, which describes 32 dimensions or scales of people's preferred or typical style of behaviour at work (13 items per scale) and has a large normative database. The OPQ32i consists of 416 items and is self-reporting on an ipsative basis, where a forced choice is requested between the most and least true in 104 quads of four statements each (Saville & Holdsworth 1999). The question as to the validity of the use of ipsative versus normative data is of particular importance in this context. Bar-On (1996a) indicates that it might not be inappropriate to interpret ipsative results in the same way as normative results where there are a larger number of scales – which is the case with the OPQ32

model. Cronbach (cited in Saville & Wilson 1991) indicates that ipsative scales can be used for comparing individuals scale by scale – as is done in this paper. The OPQ32i has evolved over a 20-year period since the commercialisation of the first OPQ Concept Model in 1981, and culminated in the launch of the OPQ32 model in 1999.

Two types of reliability studies were carried out on the OPQ32i, including internal consistency and retest reliability (Saville & Holdsworth 1999). Five types of validity studies were conducted on the OPQ32i instrument, namely, content validity, face validity, criterion validity and construct validity (concurrent and predictive). Saville & Holdsworth conclude that the OPQ32i is valid and capable of achieving the objectives for which it was designed.

Procedure

The OPQ32i is used in the company's recruitment processes, personal development and 360-degree performance evaluation. Each individual concomitantly completed the OPQ32i and the Bar-On EQ-i questionnaires under prescribed test conditions.

Statistical analysis

Statistical analysis was carried out with the help of the SPSS program. Descriptive statistics were used to analyse the data. Although the measuring instruments have proven reliability (Bar-On 1997a, 1997b; Saville & Holdsworth 1999), as already discussed, it was decided also to compute the Cronbach alpha coefficients to assess the reliability of the measuring instruments that were used in the study. The variables that are used to determine the relationship between the Bar-On EQ-i and the OPQ32i are the 32 scales of the OPQ32i and the 15 scales of the Bar-On EQ-i. Firstly, all these scales were correlated (Pearson Product Moment Correlations) – between the whole OPQ32i and Bar-On EQ-i. Secondly, the Bar-On EQ-i was correlated with only the OPQ32i domains that are used to generate the OPQ32i EI report. Thirdly, only the core Bar-On EQ-i scales were correlated with the OPQ32i EI domains.

The magnitude of correlations required for statistical significance for a sample of 40 participants are $r > 0.37$ for $p < 0.01$, or $r > 0.26$ for $p < 0.05$. However, in our discussion of the data, we will harness an additional hurdle and refer only to Cohen's (1988) effect size definitions, where 0.10 indicates a small effect size, 0.30 a medium effect size, and 0.50 a large effect size, and focus on correlations that meet this practical significance criterion.

Results

Descriptive statistics of the Bar-On EQ-i and the OPQ32i are given in Tables 4 and 5 respectively. The Bar-On EQ-i measures EQ on a scale that ranges from 50 to 150, with 100 in the middle of the effective range (median). Scores ranging from 50 to 85 indicate areas of enrichment, scores ranging from 85 to 115 indicate effective functioning, and scores ranging from 115 to 150 indicate enhanced skills. The scores for the respective domains are umbrella or summative scores derived from the subscales clustered under each domain.

From Table 4, the following is clear. The Total EQ (mean = 96.00) and the scores for the respective domains are within the range of effective functioning (between 85 and 115). However, if the standard deviations for the Total EQ and respective domains are scrutinised, the apparent indications are that although the Total EQ is within the effective functioning range, there seem to be areas of enrichment (developmental areas) in all the domains – as indicated by the minimum scores for all domains below 85. It is also evident that there are individuals in the population with enhanced skills in all the domains. A frequency analysis indicated that 6 (17% of the population) respondents' Total EQ is in the area of enrichment (developmental needs), and the remainder of the population clustered toward the upper end of effective functioning into the enhanced skills range. This is of particular importance to the organisational intervention that was designed following this study.

In a study by the Irish Management Institute (2003), where the Bar-On EQ-i was administered to over a 1 000 sales personnel, it was found that EQ as measured by the BarOn EQ-i is highly predictive of general sales success (stepwise logistic regression). The model indicates that of the 15 EQ subscales measured by the BarOn EQ-i, those most predictive of general sales success in the organisation studied were assertiveness, empathy, happiness, emotional self-awareness and problem-solving skills. Geographic area assigned was not predictive of success, nor were gender, ethnicity, education, age or hours worked. The odds for success were 2.7 times greater for those fitting this index. The subscale scores in Table 5 indicate that,

Table 4: Bar-On EQ-i descriptive statistics (N = 38)

Variable	Mean	Min	Max	SD
Domains				
Total EQ	96.00	68	116	18.55
Intrapersonal EQ	100.16	71	119	12.20
Interpersonal EQ	96.68	64	122	12.90
Stress Management EQ	97.82	68	128	12.78
Adaptability EQ	98.76	70	121	10.87
General Mood EQ	99.29	72	123	12.45
Subscales				
Self-regard* (SR)	102.24	80	120	11.26
Emotional Self-awareness** (ES)	94.45	82	121	19.33
Assertiveness** * (AS)	102.24	68	123	12.67
Independence (IN)	96.87	65	120	14.06
Self-actualisation* (SA)	102.89	77	122	10.31
Empathy** (EM)	97.66	53	122	15.38
Social Responsibility (RE)	95.24	44	119	14.78
Interpersonal Relationships (IR)	98.24	67	122	12.98
Stress Tolerance* (ST)	101.24	72	123	12.25
Impulse Control (IC)	95.47	58	126	15.02
Reality Testing (RT)	97.24	61	117	12.66
Flexibility (FL)	100.89	72	129	11.48
Problem Solving ** (PS)	98.95	51	129	14.51
Optimism (OP)	96.29	71	122	13.40
Happiness** * (HA)	102.34	72	123	12.65

* Factors essential for Insurance Sales People success (Stein & Book 2000);
** Factors essential for General Sales People success (Irish Institute for Management 2003).

with respect to general sales success, the highest scores in the tested population were obtained only in the scales of assertiveness and happiness

It should be borne in mind that the population under discussion is specifically focused on insurance sales rather than general sales. In this regard, Stein & Book (2000) indicate that the five most important factors for insurance salespeople (n = 97) seem to be assertiveness (102.24), self-regard (102.24), happiness (102.34), stress tolerance (101.24) and self-actualisation (102.89) – with the present sample's mean scores in brackets. It is clear that the highest five mean EQ-i scores for the sample confirm Stein & Book's findings quite articulately.

The raw scores for each factor in the OPQ32i range from 0 to 26. In the generation of reports, these scores are converted to sten scores. In Table 5, a UK managerial and professional norm group was utilised to give a sten score indication for the study sample compared to this norm group. For 16 of the 32 OPQ32i factors, the study sample had a sten score of 5 – larger than or equal to 50% of the norm group for half the scales. For 6 of the 32 OPQ32i

Table 5: OPQ32i descriptive statistics per scales (N = 38)

Variable	Mean (Sten*)	Min	Max	SD
FE 1 – Relaxed	08.92 (5)	1	17	3.47
FE 2 – Worrying	07.42 (4)	1	20	4.40
FE 3 – Tough Minded	09.26 (5)	3	16	3.55
FE 4 – Optimistic	17.16 (7)	12	24	2.87
FE 5 – Trusting	10.53 (5)	0	20	4.91
FE 6 – Emotionally Controlled	11.76 (5)	4	24	4.88
FE 7 – Vigorous	13.39 (4)	6	24	4.13
FE 8 – Competitive	17.13 (7)	8	25	5.10
FE 9 – Achieving	19.18 (7)	10	25	3.73
FE10 – Decisive	13.55 (6)	4	23	4.99
RP 1 – Persuasive	15.32 (7)	2	24	4.29
RP 2 – Controlling	17.84 (7)	7	25	4.59
RP 3 – Outspoken	12.37 (5)	2	25	5.12
RP 4 – Independent Minded	13.13 (5)	2	22	4.34
RP 5 – Outgoing	10.21 (5)	1	23	5.76
RP 6 – Affiliative	12.18 (4)	5	21	4.57
RP 7 – Socially Confident	12.16 (5)	3	20	5.27
RP 8 – Modest	12.71 (5)	1	22	4.30
RP 9 – Democratic	12.97 (5)	6	20	4.23
RP10 - Caring	13.74 (4)	5	22	4.20
TS 1 – Data Rational	12.24 (6)	2	25	6.40
TS 2 – Evaluative	13.55 (5)	4	19	3.54
TS 3 – Behavioural	12.76 (4)	6	24	4.70
TS 4 – Conventional	11.53 (6)	2	22	5.16
TS 5 – Conceptual	11.50 (5)	4	24	5.01
TS 6 – Innovative	11.29 (5)	0	25	6.52
TS 7 – Variety Seeking	13.32 (4)	7	20	3.50
TS 8 – Adaptable	14.24 (5)	5	21	3.85
TS 9 – Forward Thinking	14.47 (6)	6	21	3.72
TS10 – Detail Conscious	12.39 (5)	1	23	5.93
TS11 – Conscientious	16.29 (5)	7	24	3.76
TS12 – Rule Following	11.47 (6)	4	22	4.91

* Converted to sten score using UK managerial and professional norm (n = 329)

factors, the study sample scored a sten of 4. Thus, the sample scored equal to approximately 31% of the norm group in terms of their worrying, vigorous, affiliative, caring, behavioural and variety seeking factors. For the remaining ten factors, the study sample scored above a sten score of 6. Thus the sample scored equal to approximately 69% of the norm group in terms of the optimistic, competitive, achieving, decisive, persuasive, controlling, data rational, conventional, forward thinking and rule following factors.

While it was reported that the two measuring instruments have good reliability (Bar-On 1997a, 1997b; Saville & Holdsworth 1999), and although the current sample size is a major limitation, it was nevertheless decided to investigate the reliability of the two scales for the current sample. Cronbach alpha coefficients were determined for the Bar-On EQ-i subscales and the OPQ32i EI Report domains. These are shown in Table 6.

From Table 6, it can be seen that Cronbach alpha coefficients of between 0.56 for the Bar-On EQ-i subscale of 'flexibility' and 0.93 for the OPQ32i 'social ease' domain were obtained. According to Nunnally & Bernstein (1994), an alpha coefficient of 0.70 is acceptable. The subscale of 'flexibility' was therefore excluded from the rest of the analysis. Although the Bar-On EQ-i subscales of 'emotional self-awareness' (0.67), 'assertiveness' (0.69), 'self-actualisation' (0.67), 'independence' (0.66), 'social responsibility' (0.69) and 'reality testing' (0.68) also showed alpha coefficients below the acceptable level of 0.70, as recommended by Nunnally & Bernstein (1994), these are still regarded as acceptable in view of the fact that the small sample size might have influenced these alpha coefficients. The correlations reported for these subscales should be interpreted with caution, however, and could not be generalised based on the limitation of the small sample used in this study.

Pearson Product moment correlations were determined to investigate the relationship between the OPQ32i scales and the Bar-On EQ-i umbrella domains. The results of the correlation analysis are displayed in Table 7.

Total Bar-On EQ-i

The total Bar-On EQ-i score is an indication of overall emotional intelligence and shows a practically significant negative correlation of large effect with the OPQ32i scale of 'worrying' (r = -0.60) and a practically significant negative correlation of medium effect with 'data rational' (r = -0.43), 'conven-

Table 6: Cronbach alpha coefficients for the measuring instruments

Cronbach alpha coefficients for Bar-On EQ-i subscales		Cronbach Alpha coefficients for OPQ32i EI report domains	
Emotional Self-Awareness	0.67	Total EI	0.74
Assertiveness	0.69	Feelings and Emotions	0.73
Self-Regard	0.79	Personal Insight	0.89
Self-Actualisation	0.67	Empathy	0.79
Independence	0.66	Social Ease	0.93
Empathy	0.78		
Interpersonal Relationship	0.77		
Social Responsibility	0.69		
Problem Solving	0.75		
Reality Testing	0.68		
Flexibility	0.56		
Stress Tolerance	0.77		
Impulse Control	0.76		
Happiness	0.79		
Optimism	0.74		

Table 7: Correlations between all of the OPQ 32i scales and Bar-On EQ-i domains

	Bar-On EQ-i					
OPQ 32i	**Total EQ**	**Intra-personal**	**Inter personal**	**Stress Management**	**Adaptability**	**General Mood**
FE 1 – Relaxed	0.06	0.03	0.02	0.22	0.01	-0.05
FE 2 – Worrying	**-0.60****	**-0.63****	**-0.47***	**-0.38***	**-0.47***	**-0.43***
FE 3 – Tough Minded	0.10	0.16	-0.05	0.12	0.19	-0.01
FE 4 – Optimistic	-0.05	-0.05	-0.11	-0.07	-0.05	0.07
FE 5 – Trusting	0.21	0.16	0.25	0.16	0.15	0.11
FE 6 – Emotionally Controlled	0.06	-0.05	**-0.31***	**0.36***	**0.35***	-0.13
FE 7 – Vigorous	**0.30***	**0.33***	0.03	0.11	**0.36***	**0.32***
FE 8 – Competitive	0.07	**0.31***	0.03	-0.27	-0.06	0.22
FE 9 – Achieving	**0.47***	**0.50****	**0.39***	0.10	**0.32***	**0.61****
FE10 – Decisive	0.07	0.17	-0.01	-0.08	0.12	-0.05
RP 1 – Persuasive	**0.36***	0.49*	**0.30***	-0.02	0.13	**0.51****
RP 2 - Controlling	0.18	0.24	0.06	0.09	0.12	0.15
RP 3 - Outspoken	0.16	0.27	0.28	0.04	0.04	0.08
RP 4 - Independent Minded	-0.26	-0.20	-0.28	-0.13	-0.12	**-0.34***
RP 5 – Outgoing	0.25	0.28	**0.57****	-0.10	-0.10	**0.43***
RP 6 - Affiliative	0.11	0.06	**0.41***	-0.06	-0.18	**0.30***
RP 7 – Socially Confident	0.18	0.23	0.28	-0.09	-0.11	**0.31***
RP 8 – Modest	-0.12	-0.23	-0.26	0.20	0.06	-0.18
RP 9 – Democratic	-0.10	-0.25	-0.02	0.11	-0.06	-0.11
RP10 – Caring	0.25	0.17	0.25	**0.33***	0.28	0.05
TS 1 – Data Rational	**-0.43***	**-0.36***	**-0.41***	**-0.32***	-0.29	**-0.36***
TS 2 – Evaluative	**-0.31***	**-0.31***	-0.25	-0.03	-0.15	**-0.46***
TS 3 – Behavioural	-0.02	-0.07	0.14	0.21	-0.08	-0.18
TS 4 – Conventional	**-0.34***	**-0.43***	-0.26	-0.12	-0.21	-0.27
TS 5 – Conceptual	-0.04	-0.12	0.02	0.09	-0.04	-0.07
TS 6 – Innovative	0.11	0.16	0.15	-0.01	0.03	0.12
TS 7 – Variety Seeking	0.15	0.25	-0.01	-0.01	0.22	0.05
TS 8 – Adaptable	-0.10	-0.22	0.05	0.02	-0.20	-0.02
TS 9 – Forward Thinking	-0.21	-0.23	**-0.42***	0.05	0.02	**-0.38***
TS10 – Detail Conscious	-0.19	-0.26	-0.22	-0.08	-0.00	-0.25
TS11 – Conscientious	0.13	0.12	0.12	-0.10	0.14	0.22
TS12 – Rule Following	-0.29	**-0.39***	**-0.39***	-0.05	-0.12	-0.21

* r > 0.30 - medium effect
** r > 0.50 - large effect

tional' (r = -0.34) and 'evaluative' (r = -0.31). Furthermore, the total Bar-On EQ-i score shows a practically significant positive correlation of medium effect with 'vigorous' (r = 0.30) and 'persuasive' (r = 0.36) and large effect with 'achieving' (r = 0.47). From this, it seems that a high emotional intelligence (as measured by the Bar-On EQ-i) is associated with a low propensity to worry ('worry-

ing'), a preference for dealing with opinions and feelings rather than facts and figures ('data rational'), a preference for new and less conventional work methods or approaches ('conventional'), a dislike of critically analysing information or focusing on potential limitations ('evaluative'), as well as a preference for keeping busy and enjoying having a lot to do ('vigorous'), being ambitious and having a preference for working toward challenging goals and targets ('achieving') and a preference for changing other people's views or being comfortable using negotiation ('persuasiveness') (as measured by the OPQ32i).

Intrapersonal (RA) EQ domain

The Bar-On EQ-i Intrapersonal domain is concerned with what is generally known as the 'inner self', and includes the subscales of emotional self-awareness, assertiveness, independence, self-regard and self-actualisation. These Intrapersonal scales measure the ability of individuals to know themselves and their feelings. The Bar-On EQ-i Intrapersonal EQ domain correlates with the same OPQ32i scales that the Total Bar-On EQ-i score correlated with, namely, 'worrying' (r = -0.63), 'data rational' (r = -0.36), 'conventional' (r = -0.43), 'evaluative' (r = -0.31), 'vigorous' (r = 0.33), 'achieving' (r = 0.50) and 'persuasive' (r = 0.49). In addition, the Intrapersonal EQ domain shows a practical significant negative correlation of medium effect with 'rule following' (r = -0.39), and a practical significant positive correlation of medium effect with 'competitive' (r = 0.31). It seems that the ability to know oneself and one's feelings (as measured by the Bar-On EQ-i) can be associated with a low propensity to worry ('worrying'), a preference for dealing with opinions and feelings rather than facts and figures ('data rational'), a preference for new and less conventional work methods or approaches ('conventional'), a dislike of critically analysing information or focusing on potential limitations ('evaluative'), a preference for keeping busy and having a lot to do ('vigorous'), being ambitious and having a preference for working towards challenging goals and targets ('achieving'), a preference for changing other people's views or being comfortable using negotiation ('persuasiveness'), as well as a propensity not to be restricted by rules and procedures, a tendency to dislike bureaucracy ('rule following') and to enjoy competitive activities ('competitive') (as measured by the OPQ32i).

Interpersonal (ER) EQ domain

The Bar-On EQ-i Interpersonal EQ domain measures the individual's ability to interact, relate well with others and possess good social skills. This domain includes the subscales of 'interpersonal relationship', 'empathy' and 'social responsibility'. It is about being able to 'emotionally read' other people. The Interpersonal domain correlates, as the Bar-On EQ-i total score, with the OPQ32i scales of 'worrying' (r = -0.47), 'data rational' (r = -0.41), 'achieving' (r = 0.39) and 'persuasive' (r = 0.30). Furthermore, the Interpersonal domain also correlates, as does the Intrapersonal domain, with the OPQ32i scale of 'rule following' (r = -0.39). In addition, the Interpersonal domain seems to be negatively related to the OPQ32i scales of 'emotionally controlled' (r = -0.31) and 'forward thinking' (r = -0.42), but positively related to 'affiliative' (r = 0.41), all of medium effect, and 'outgoing' (r = 0.57), of large effect. From this, it seems that the ability to relate well to others and the possession of good social skills (as measured by the Bar-On EQ-i) can be associated with being low on worrying, data rational and rule following, and being higher on achieving and being persuasive. Apart from this, it can be associated with openly expressing feelings and displaying emotions clearly ('emotionally controlled'), being more likely to focus on immediate, rather than long-term issues ('forward thinking'), enjoying others' company ('affiliative'), as well as being talkative and enjoying attention ('outgoing') (as measured by the OPQ32i).

Stress Management (SM) EQ domain

The Bar-On EQ-i Stress Management EQ domain concerns the ability to understand stress and to work well under pressure without caving in, falling apart, losing control or going under. It includes the subscales of 'stress tolerance' and 'impulse control'. The domain shows a negative correlation of practical significance of medium effect with the OPQ32i scales of 'worrying' (r = -0.38) and 'data rational' (r = -0.32), as well as a positive correlation of practical significance of medium effect with 'emotionally controlled' (r = 0.36) and 'caring' (r = 0.33). It therefore seems that the ability to manage stress (as measured by the Bar-On EQ-i) can be associated with a low propensity to worry ('worrying'), a preference for dealing with opinions and feelings rather than facts and figures ('data rational'), at times not displaying emotions or concealing feelings ('emotionally controlled'), as well as being sympathetic and considerate towards others or becoming involved with others' problems ('caring') (as measured by the OPQ32i).

Adaptability (AR) EQ domain

The Bar-On EQ-i Adaptability EQ domain is concerned with the ability to be flexible, realistic and to solve problems. It includes the subscales of 'reality testing', 'flexibility' and 'problem solving'. The domain shows a negative practically significant correlation of medium effect with the 'worrying' (r = -0.47) OPQ32i scale, as well as a positive practically significant correlation of medium effect with the 'emotionally controlled' (r = 0.35), 'vigorous' (r = 0.36) and 'achieving' (r = 0.32) OPQ32i scales. These correlations suggest that being able to size-up and respond to a wide range of difficult situations (as measured by the Bar-On EQ-i) can be associated with a low propensity to worry ('worrying'), at times not displaying emotions or concealing feelings ('emotionally controlled'), a preference to keep busy and enjoying having a lot to do ('vigorous'), being ambitious and a preference to work towards challenging goals and targets ('achieving') (as measured by the OPQ32i).

General Mood (GM) EQ domain

The Bar-On EQ-i General Mood EQ domain measures the individual's ability to be optimistic and cheerful and to create a positive atmosphere in the workplace. This domain includes the subscales of happiness and optimism. The General Mood domain correlates with the same OPQ32i scales as the Bar-On EQ-i total score, namely, worrying (r = -0.43), data rational (r = -0.36), evaluative (r = -0.46), vigorous (r = 0.32), achieving (r = 0.61) and persuasive (r = 0.51). It furthermore correlates with the same OPQ32i scales as the Interpersonal domain, namely, forward thinking (r = -0.38), outgoing (r = 0.43) and affiliative (r = 0.30). Apart from these, the General Mood domain also shows a practically significant negative correlation of medium effect with 'independent minded' (r = -0.34), and a practically significant positive correlation of medium effect with 'socially confident' (r = 0.31). It therefore seems that being content and optimistic (as measured by the Bar-On EQ-i) can be associated with low worrying, scoring lower on 'data rational', 'evaluative' and 'forward thinking', scoring higher on 'vigorous', 'achieving', 'persuasive', 'outgoing' and 'affiliative', as well as being associated with being prepared to follow the consensus or majority decision ('independent minded') and feeling comfortable when first meeting people or being at ease in formal social situations ('socially confident') (as measured by the OPQ32i).

Although the correlations between the Bar-On EQ-i subscales and the OPQ32i scales are not covered in this article, it can be mentioned that there is no significant correlation between the OPQ32i 'optimistic' (FE4) subscale and the Bar-On EQ-i 'optimism' subscale, which forms part of the General Mood domain. Although the scale names are the same, it seems that the content measured by these two subscales could possibly differ.

As mentioned earlier, the OPQ32i generates an EQ report. Correlations between the Bar-On EQ-i and the subdomains of the OPQ32i EI are displayed in Table 8.

The practically significant positive correlation of medium effect between the Total EQ score of the OPQ32i and the Bar-On EQ-i total score (r = 0.32) indicates a relationship between the two instruments and is an indication of construct correlation between these two instruments. Apart from this overall correlation, the Total EQ score of the OPQ32i also correlates with the Bar-On EQ-i subscale of 'emotional self-awareness' (r = 0.35) in the Intrapersonal domain and the domains of Interpersonal EQ (r = 0.53) and General Mood EQ (r = 0.36).

The OPQ32i Feelings and Emotions domain correlates with the Bar-On EQ-i Intrapersonal EQ (r = 0.31) and the Bar-On EQ-i Interpersonal EQ (r = 0.33) domains and the subscale of 'happiness' (r = 0.48). The Personal Insight domain only correlates with the subscale of 'empathy' (r = 0.37) on the Bar-On EQ-i. The domain of Empathy on the OPQ32i EI correlates with the domain of Stress Management (r = 0.34) on the Bar-On EQ-i. It also shows a negative correlation with the subscales of 'assertiveness' (r = -0.36) and 'independence' (r = -0.31) and a positive correlation with the subscale of 'problem solving' (r = 0.31). It is interesting to note that according to the content commonality hypothesis, and following the foregoing reasoning, the Empathy domain in the OPQ32i-EI report should correlate with the Bar-On EQ-i Interpersonal EQ; it does not correlate significantly (r = -0.07). Furthermore, the 'empathy' subscale on the Bar-On EQ-i does not correlate with the OPQ32i Empathy domain. From this, it seems that the OPQ32i possibly measures other constructs under its Empathy domain, and that the commonality between the scale and domain names does not confirm content commonality, although the small sample prohibits generalisation. However, the Social Ease domain of the OPQ32i EI correlates with the Interpersonal EQ (r = 0.51) and General Mood (r = 0.42) domains on the Bar-On EQ-i. Social Ease also shows a negative correlation with the subscale of 'problem solving' (r = -0.39) and a positive correlation with the subscale of 'happiness' (r = 0.48).

Bar-On (1997a) indicates that of the 15 subscales that are measured in the Bar-On EQ-i, five scales could be regarded as core topographic factors.

Table 8: Correlations between the Bar-On EQ-i domains and subscales and OPQ32i EI report domains

	Total OPQ EI	Feelings and Emotions	Personal Insight	Empathy	Social Ease
Total Bar-On EQ	**0.32***	0.25	0.18	0.01	0.22
Intrapersonal	0.26	**0.31***	0.16	-0.17	0.23
Emotional Self-awareness	**0.35***	0.29	0.11	0.05	0.29
Assertiveness	0.07	0.24	0.05	**-0.36***	0.18
Self-regard	0.25	0.17	0.17	0.04	0.14
Self-actualisation	0.23	**0.36***	0.18	-0.23	0.18
Independence	0.18	0.26	0.17	**-0.31***	0.20
Interpersonal	**0.53****	**0.33***	0.24	0.01	**0.51****
Empathy	**0.52****	0.23	**0.37***	0.07	**0.37***
Social Responsibility	**0.38***	0.19	0.18	0.02	**0.37***
Interpersonal Relationships	**0.41***	**0.34***	0.10	-0.07	**0.46***
Stress Management	0.19	0.05	0.15	**0.34***	-0.08
Stress Tolerance	0.21	0.18	0.06	0.10	0.13
Impulse Control	0.14	-0.07	0.19	**0.43***	-0.20
Adaptability	0.03	0.02	0.09	0.13	-0.14
Reality Testing	0.05	0.08	-0.01	0.04	0.02
Problem Solving	-0.14	-0.15	0.00	**0.31***	**-0.39***
General Mood	**0.36***	0.27	0.15	-0.13	**0.42***
Optimism	0.06	-0.06	0.01	-0.13	0.23
Happiness	**0.51****	**0.48***	0.21	-0.11	**0.48***

* r > 0.30 - medium effect
** r > 0.50 - large effect

They are 'emotional self-awareness' (ES), 'assertiveness' (AS), 'empathy' (EM), 'impulse control' (IC) and 'reality testing' (RT), as displayed in bold print in Table 8.

Emotional self-awareness (ES)

The 'emotional self-awareness' core factor measures the ability to recognise and understand one's feelings and emotions, differentiate between them and know what caused them and why. As already mentioned, this core factor correlates with the Total OPQ32i EI score (r = 0.35).

Assertiveness (AS)

The 'assertiveness' core factor is the ability to express feelings, beliefs and thoughts and defend one's rights in a non-destructive way. As already reported, it demonstrated a practically significant negative correlation of medium effect with the OPQ32i Empathy domain (r = -0.36).

Empathy (EM)

The 'empathy' core factor is the ability to be attentive to and to understand and appreciate the feelings of others. It correlates with three of the five OPQ32i EI domains, namely: Total OPQ32i EI (r = 0.52), Personal Insight (r = 0.37) and Social Ease (r = 0.37). Empathy is the Bar-On EQ-i core factor that correlates with most of the OPQ32i EI domains and with the overall OPQ32i EI. It correlates with scales in both the OPQ32i's Managing Feelings (Intrapersonal EQ) and Managing Relationships (Interpersonal EQ) domains. It is clear that a high score on the Empathy scale on the Bar-On EQ-i is not only related to interpersonal EQ but also Intrapersonal EQ level and Total EQ as measured by the OPQ32i.

Impulse control (IC)

The 'impulse control' core factor is the ability to resist or delay an impulse, drive or temptation to act. This core factor of the Bar-On EQ-i correlated significantly with the Empathy domain of the OPQ32i EI.

Reality testing (RT)

The 'reality testing' core factor is the ability to assess the correspondence between what is experienced (the subjective) and what exists in reality (the objective). This core factor showed no correlation with any of the OPQ EI domains.

Discussion

The relationship between the Bar-On EQ-i and the OPQ32i

The small sample size used in this study is a serious limitation and it should therefore be noted that the interpretation of these results could possibly lead to a Type II error. However, it seems that a total emotional intelligence score and scores on the various domains of the Bar-On EQ-i can be associated with lower scores on some of the subscales ('data rational', 'evaluative', 'conventional', 'forward thinking' and 'rule following') of the Thinking Style domain of the OPQ32i, but in general higher scores on some of the subscales ('persuasive', 'outgoing', 'affiliative', 'socially confident' and 'caring') of the Relationship with People domain, as well as generally higher scores on some of the subscales ('vigorous', 'competitive' and 'achieving') of the Feelings and Emotions domain of the OPQ32i. This is an indication of convergent and divergent construct validity between these two measurements.

It is interesting to note that a lower score on the 'emotionally controlled' subscale of the OPQ32i is associated with the Interpersonal domain of the Bar-On EQ-i, indicating that a spontaneity to engage and openly express feelings can be associated with the ability to relate well with others and the possession of good social skills. However, a higher score on the 'emotionally controlled' subscale of the OPQ32i is associated with the Stress Management and Adaptability domains of the Bar-On EQ-i, indicating that concealing feelings from others and rarely displaying emotions can be associated with the ability to cope with stress and to be flexible, realistic and able to solve problems. The preference on the 'emotionally controlled' subscale (as measured by the OPQ32i) would therefore lead to scoring differently on the Interpersonal domain of the Bar-On EQ-I, on the one hand, and the Stress Management and Adaptability domains of Bar-On EQ-I, on the other.

Another interesting finding is the association between the subscale of 'caring' on the OPQ32i and the domain of Stress Management on the Bar-On EQ-i. It seems that being sympathetic and considerate towards others, helping and supporting others or becoming involved in others' problems can be associated with the ability to work well under pressure without losing control. This is a relationship that can be investigated further.

Contradictory to expectations, no statistically or practically significant relationship was found between the 'optimistic' subscale of the OPQ32i (expecting things will turn out well, concentrating on the positive aspects of the situation and having an optimistic view of the future) and the 'optimism' subscale of the Bar-On EQ-i (the ability to look on the brighter side of life and to maintain a positive attitude even in the face of adversity). Although the definitions seem to overlap, on closer examination it would appear that these two subscales may not be related (r = 0.12). However, the limited sample size and lack of power precludes generalisation. A closer look at the items measuring these two subscales might shed more light on this finding. It is recommended that the relationship be investigated further.

The relationship between the Bar-On EQ-i and the OPQ32i EI subscales

A significant correlation of moderate effect was found between the total EQ score on the OPQ32i EI and the total EQ score on the Bar-On EQ-i, indicating that, to a certain degree, the two instruments measure the same construct. A closer look at the relationship between the OPQ32i EI domains and the Bar-On EQ-i domains and subscales reveals that the total EQ score on the OPQ32i and the Feelings and Emotions domain relate to the Intrapersonal, Interpersonal and General Mood domains of the Bar-On EQ-I, as can be expected. Contrary to expectations, the Personal Insight domain of the OPQ32i only relates to the 'empathy' subscale (within the Interpersonal domain) of the Bar-On EQ-i. According to the definition of 'personal insight' – how well you understand your feelings about yourself and others – one would expect this domain also to show some relationship to the Intrapersonal domain of the Bar-On EQ-i. Furthermore, the Empathy domain (how well you appreciate the perspectives of other people and how they feel or think about things) of the OPQ32i relates to the 'assertiveness' and 'independence' subscales (in the Intrapersonal domain), 'problem solving' (in the Adaptability domain), and the Stress Management domain (specifically the subscale of 'impulse control') of the Bar-On EQ-i. However, one would also expect

this domain to show some relationship to the subscale of 'empathy' and the Interpersonal domain of the Bar-On EQ-i. Although there appears to be an overlap in the definition of these two concepts, there does not seem to be content overlap in terms of how the two instruments measure the concept of empathy. Again, the limited sample size prohibits generalisation. And lastly, as expected, the Social Ease domain shows a relationship with the Interpersonal domain, the 'problem solving' subscale (in the Adaptability domain) and the General Mood domain of the Bar-On EQ-i.

An investigation into the relationship between the OPQ32i EI domains and five core factors of the Bar-On EQ-i indicates that the core factor of 'empathy' relates to the Total EQ score, the Personal Insight and the Social Ease domains of the OPQ32i EI. The core factor of 'emotional self-awareness' also relates to the Total EQ score of the OPQ32i EI. It therefore seems that the ability to recognise and understand one's feelings and emotions, differentiate between them and know what caused them and why, as well as the ability to be attentive to, and to understand and appreciate, the feelings of others (as measured by the Bar-On EQ-i), represents the Total EQ score as measured by the OPQ32i EI. This seems to represent the Intrapersonal and Interpersonal domain of the Bar-On EQ-i relating to the Managing Feelings and Managing Relationships domains on the OPQ32i EI.

Apart from the Intrapersonal and Interpersonal domains, the Bar-On EQ-I measures three other domains as well: Stress Management (SM), Adaptability (AR) and General Mood (GM), which Bar-On describes as social intelligence measures. These domains seem to be related in different degrees to the Managing Relationships domain of the OPQ32i EI, again indicating construct overlap between the two measures.

The respective OPQ32i scales and the formulae that constitute the respective OPQ32i EI domains were not made available for this research. Further research is needed to ascertain the extent to which the construct overlap would be influenced if this could also be factored in.

Commercial application of the two instruments

Both reports generate an emotional intelligence output. The OPQ32i EI is a second order report generated from the OPQ32i, whereas the Bar-On EQ-i is a dedicated EQ instrument. From a developmental perspective, the Bar-On EQ-i is very helpful, user friendly, much more detailed in reporting on subscales, and very appropriate in generating a good understanding of EQ constructs. Given the Bar-On EQ-i's very specific prediction of sales success, further research needs to be conducted as to the corresponding predictive validity of the OPQ32i – with EQ taken into account.

A limitation of this study is that a small sample was used. Consequently, some of the subscales of the Bar-On EQi showed lower Cronbach alpha coefficients than the acceptable level of 0.70, as recommended by Nunnally & Bernstein (1994). The results regarding these subscales should therefore be interpreted with caution. This research could therefore also be repeated with similar, larger samples or samples from other organisations.

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