



A UK-wide analysis of trait emotional intelligence within the radiography profession

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ABSTRACT

The aim of this study was to profile the Trait emotional intelligence (EI) of the radiography profession, explore any differences between subgroups, compare the profession with a normative group and investigate the relationship between EI and the leaders of the profession. An online UK-wide survey was conducted using the Trait Emotional Intelligence Questionnaire, a self-report measure. Three main analyses were undertaken to investigate any differences between the sample and population, the radiographer subgroups and the sample and a normative group. The sample had similar characteristics to the population. There were differences between types of radiographer, with nuclear medicine radiographers scoring consistently lower than other groups. There were differences between the leaders and other members of the profession particularly in the Sociability factor. Radiographers scored higher than the TEIQue normative group for Global EI and three of the four factors. The study has benchmarked the Trait EI of one healthcare profession and identified areas for future research to develop our understanding of emotional intelligence.

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Introduction

Emotional Intelligence (EI) is a potentially valuable attribute in many professions including medicine,¹ dentistry,² and Nursing.^{3,4} For example Arora *et al.* (2010)⁵ undertook a systematic review to identify the value of emotional intelligence in medicine using medical education competencies and reported that EI was positively associated with compassionate and empathic patient care, higher-scoring assessment of knowledge and effective coping with organisational pressures and leadership. EI also contributed to improved teamwork and doctor-patient communication.

Potential application of EI to the healthcare professions^d

The potential value of EI in healthcare professions stems both from its relevance to interactions and patient needs and also from

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^d Also known as allied health professions examples are radiographers, physiotherapists, occupational therapists. See <http://www.nhs.uk/healthcarecareers/details/Default.aspx?id=279>.

evidence, which suggests that EI can be enhanced. Naturally the significance of self-awareness and self-regulation of one's emotions is not confined to health settings, but is of high priority in many sectors. For example graduates from MBA programmes have demonstrated 47% improvement in self-confidence and self-management competencies compared to baseline measures collected on entry, as well as 75% increases in empathy and leadership success.⁶ The importance of emotional abilities is underlined by their contribution to the quality of work-based relationships⁷ and where high levels are exhibited, these can be harnessed to encourage positive interactions with others.⁸ The impact of employee EI on those in receipt of services has been shown to have positive outcomes for customers' perceptions and loyalty.⁹ This could have clear implications for healthcare settings, where patients' willingness to attend and compliance with interventions are vital. In relation to employee behaviour, the role of EI in a range of work-related variables has been acknowledged in job performance and job satisfaction.¹⁰ Taken from either side of the client–professional interaction, higher EI is linked to more positive outcomes.

Precedents for the type of comparison study described here do exist, but have not featured healthcare professionals. Of relevance to this paper, Sanchez-Ruiz, Perez-Gonzalez and Petrides¹¹ found that both arts and social science students scored higher than

technical students on Emotionality, using the same measure adopted here, which indicates the strong possibility of interdisciplinary differences which relate to chosen specialities. Within the radiography speciality only two reviews were found in the literature.^{12,13} These narratives use the Mayer, Salovey and Caruso model of EI¹⁴ and describe the features of EI which might be beneficial in the practice of radiography. The authors use the defined radiographer ‘standards of proficiency’¹⁵ which articulates the attitudes, knowledge and skills that are required to register and practice as a radiographer. Links made include the ability to recognise emotion in others, which could help to improve patient communication and care and prevent de-personalisation of the patient. However, there is no empirical evidence offered to support these assertions in the field of healthcare professions and there is clearly a need to develop the evidence base. The current study is designed to provide baseline data to profile emotional intelligence within the profession of radiography.

Personality characteristics of the radiography profession

The little research into the personality characteristics of the radiography profession has largely focussed on the two disciplines of diagnostic (DR) and therapy radiography which, although they have similar skill and competency requirements, have quite different work contexts and require unique competencies as defined by the Health Professions Council.¹⁵ Casselden (1988)¹⁶ investigated the personality dimension of empathy in radiographers using the Interpersonal Reactivity Index, a measure of dispositional empathy,¹⁷ and found that radiographers ($n = 100$) scored higher than the published IRI norms for ‘perspective taking’ and ‘empathic concern’. Also therapy radiographers scored higher ($p \leq 0.05$) on the ‘empathic concern’ scale than diagnostic radiographers. Low scores were noted for the ‘personal distress’ subscale indicating a degree of immunity and/or control of emotional responses to distress and suffering.

Differences between the two radiography disciplines ($n = 62$) were again found by Mackay (1992)¹⁸ using the Occupational Personality Questionnaire Concept model 5¹⁹ to explore personality characteristics at work. He discovered significant differences in six of the thirty-one OPQ traits. Therapeutic radiographers scored higher for Data Rational, Behavioural, Democratic, Caring and Detail Conscious. Two of these traits, Democratic ($p \leq 0.01$) and Caring ($p \leq 0.01$), comprise two thirds of the Empathy subscale and support the differences found by Casselden.¹⁶

However this early work used small samples and limited analyses so further validation of these findings is required.

Leadership abilities and radiography

Emotional intelligence has been linked to those with leadership abilities in several studies.^{20–22} In the context of the radiography profession, the clinical leadership is made up of consultant radiographers, advanced practitioners and managers. Evidence of personal leadership qualities from the National Health Service Leadership Qualities Framework was found by Hogg, Hogg, and Henwood (2008).²³ Mackay *et al* (2010b)¹³ mapped several of these personal qualities to the facets of the Trait emotional intelligence model and suggested that these qualities were present and spread across all four Trait EI factors. Therefore there is an expectation of a relationship between EI and the leaders in the profession.

The present study investigated the Trait EI profiles of UK radiographers as a whole group as well as across the sub-specialities of radiography, and further compared them against a general UK group of individuals from various jobs.

Table 1
Demographics of sample and population.

Demographic		Sample	UK Radiographer Population ^a
Gender	Female	1690 (85%)	20,219 (80%)
	Male	307 (15%)	5109 (20%)
	Total	1997 (7.9%)	25,328
Age	mean years (SD)	41.2 (11.6)	39.7 (11.1)
Type of work	Diagnostic Radiographer	1537 (77%)	20,834 (82%)
	Therapeutic Radiographer	244 (12%)	3170 (12%)
	Other	216 (11%)	1324 (6%)
Country of practice	England ^b	1601(80%)	15,636 (79%)
	Scotland ^b	284 (14%)	2278 (11%)
	Wales ^b	78 (4%)	1367 (7%)
	Northern Ireland ^c	34 (2%)	517 (3%)

^a from HPC 2010.

^b from NHS 2008.

^c DHSSPS-NI 2008.

Hypotheses

Radiographers would score more highly than a UK normative comparison group.

Therapy radiographers would score more highly than diagnostic radiographers on Trait EI – Emotionality.

Clinical radiography leaders would score higher on Trait EI than their junior colleagues.

Material and methods

Participants

All United Kingdom radiographers, from the 25,328 individuals registered to practice radiography in this country,²⁴ were invited to complete an online questionnaire. The subsequent raw data set consisted of a sample of 1997 (see Table 1 for demographics). The sample was closely representative of the population on these parameters but was self selected.

Demographic data available for the UK radiographer population from the HPC did not include country of origin so this was estimated from data obtained from NHS England, Scotland, statsWales, and DHSSPS Northern Ireland headcount data for 2008.

Measure

The short form of the Trait emotional intelligence questionnaire²⁵ was selected which shows good validity and reliability.²⁶ It is a 30-item questionnaire yielding scores on global Trait EI and its four factors. Although the factor scores have lower reliability than those in the full form²⁵ its brevity makes it ideal for use when a rapid Trait EI assessment is required.²⁷

Seniority levels of NHS staff were determined by a framework called the ‘Agenda for Change’.²⁸ This classification system (4–9) ranks staff according to their level of skills and responsibility. The upper bands of this classification system at 8a, b, c, represent the leadership/managerial levels called professional managers.

Procedure

The sample was recruited using a range of activities, including articles in the national radiography press, conferences, and professional networks. A website was set up to host the questionnaire and paper versions were also distributed. A pilot study was undertaken to fine-tune the technical performance of the survey tool and website. Ethical approval was obtained from the University of Salford Research Governance and Ethics committee prior to the start of the survey.

Table 2
The six variables and their factors used in the ANOVA.

Variable	Factors
Gender	Male
	Female
Grading (Agenda for Change)	Band 4
	Band 5
	Band 6
	Band 7
	Band 8
	Band 8a
	Band 8b
	Band 8c
Age group (years)	21–29
	30–39
	40–49
	50–59
Type of work	60–69
	diagnostic
	therapeutic
	assistant practitioner
Type of diagnostic radiographer	nuclear medicine technologist
	nuclear medicine (NMRad)
	angiographer
	trauma
	magnetic resonance
	general
	mammographer
	ultrasonographer
Mode of practice	computerised tomography
	management
	education
	clinical practice
	research
	clinical practice and management
	other

Statistical analysis

Three main analyses were undertaken. Firstly to explore the differences between the sample and the whole UK radiographer population to be able to make judgements about the representativeness of the data. Secondly, and the main analysis, to investigate the differences in radiographer demographics and subgroups and finally to compare the radiography sample with a comparison group taken from the TEIQue – SF normative database.²⁹

Demographic variations between sample and population

Differences between the sample and population were found for several of the demographic variables. The age population distribution data ranged from 21 to 69 ($M = 39.7$ and $SD = 11.2$) and was a bimodal distribution with peaks at 30 and 46. A t -test for differences in age was statistically significant ($p \leq 0.01$ sample mean = 41.2 $SD = 11.6$) with a difference of 1.52 years. However the sample represented ages from across the whole range and this difference is considered to be of little practical significance (Cohen's $d = -0.132$ a small effect size).

Chi-squared goodness of fit tests showed a highly significantly difference for gender $\chi^2 [1] = 16.7, p \leq 0.001$ ($n = 1997$), and country $\chi^2 [3] = 42.2, p \leq 0.001$, ($n = 1997$) but not for type of work $\chi^2 [3] = 0.99, p = 0.75$ ($n = 1781$). Whilst statistically significant these differences are not thought to be of practical significance and the sample is considered to be similar to the population on these parameters (see Table 2).

Analysis of global and four factors of the Trait EI model

A six-way between-groups analysis of variance was conducted, for main effects only, to compare the differences in global Trait EI

Table 3
Differences in global Trait EI score for type of DR (* $p \leq 0.05$).

Type of DR	N	Global score (M)	SD
Angiographer	28	5.60*	0.46
Trauma	36	5.35	0.64
MR	117	5.35	0.55
General	55	5.35	0.52
Mammographer	193	5.34	0.58
US	113	5.32	0.62
CT	61	5.22	0.85
Nuclear Medicine	63	5.14*	0.73

and its four factors between radiographer subgroups. The independent variables used were gender, grading, age group, type of work (radiographer speciality), type of DR (diagnostic radiographer subspeciality) and mode of practice (Table 2 for details of the variables and factors).

The dependent variable consisted of scores of global Trait EI, Well-being, Self-control, Emotionality and Sociability. Post-hoc test were undertaken but in looking for pairs of groups that are significantly different, we face the problem of making valid inferences whilst making multiple comparisons. Here statisticians offer many different methods; we used the Tukey–Kramer procedure. This is very widely used in life-sciences research, and has the merit of being among the more conservative procedures.³⁰ Effect size was calculated using partial eta squared (unless indicated) this is analogous to R squared. Statistical Package for the Social Sciences (SPSS®) version 17 was used for the statistical analysis.

Comparison with normative data set

The comparison normative group ($n = 866$) was drawn from the TEIQue-SF normative database²⁹ and consisted of a range of jobs e.g. private, public sector jobs, armed forces. The mean, age range and gender proportion of these two samples were different (see Tables 8 and 9) so age and gender matching by group was undertaken before an ANOVA and post-hoc Tukey tests were run to explore differences between radiographer and normative groups for the global EI and four factor scores.

Results

Global Trait EI

There were statistically significant main effects for grading $F(7, 1807) = 2.53, p = 0.014$ and type of DR $F(8, 1917) = 1.9, p = 0.05$. Despite reaching statistical significance the actual difference in mean scores between groups was small. For type of DR the effect size, was 0.008 and for grading was 0.009. Post-hoc comparisons indicated no differences for grading and that the mean score for the angiographer groups ($M = 5.60, SD = 0.46$) was significantly different from the NM Rad group ($M = 5.14, SD = 0.73$), $p \leq 0.05$. No other differences were significant (Table 3).

Well-being

There were statistically significant main effects for type of work $F(4, 1781) = 3.11, p = 0.014$ [partial eta squared = 0.006], type of DR $F(8, 1917) = 2.79, p = 0.004$ [partial eta squared = 0.12] and grading $F(7, 1997) = 3.88, p \leq 0.01$ [partial eta squared = 0.14]. Despite reaching statistical significance the actual difference in mean scores between groups was small. Post-hoc comparisons indicated no differences for grading, mode of practice, type of work. For type of DR the mean score for the angiographer groups ($M = 6.12,$

Table 4
Differences in well-being score between different types of DR (* $p \leq 0.05$, ** $p \leq 0.01$).

Type of DR	n	Well-being score (M)	SD
Angiographer	28	6.12**	0.68
Trauma	36	5.89	0.76
Mammographer	193	5.86*	0.72
General	55	5.85	0.72
MR	117	5.79	0.79
US	113	5.72	0.82
CT	61	5.67	1.09
Nuclear Medicine	63	5.46***	1.04

SD = 0.68) was significantly different from the NM Rad group ($M = 5.46$, SD = 1.04) and the NM Rad group from the mammography group ($M = 5.86$, SD 0.72). No other differences were significant (Table 4).

Self-control

There were statistically significant main effects for grading $F(7, 1917) = 2.12$, $p = 0.05$. Despite reaching statistical significance the actual difference in mean scores between groups was small, with the partial eta squared being 0.008. Post-hoc comparisons indicated that the mean score for the Band 6 group ($M = 4.82$, SD = 0.888) was significantly lower than Band 8a group ($M = 5.09$, SD = 0.836). No other differences were significant (Table 5).

Emotionality

There were statistically significant main effects for type of DR $F(8, 1917) = 2.20$, $p = 0.02$ (Table 6). Despite reaching statistical significance the actual difference in mean scores between groups was small, with the partial eta squared being 0.009. Post-hoc comparisons indicated that the mean score for mammographer ($M = 5.58$, SD = 0.74) was significantly different from NM Rad ($M = 5.12$, SD = 0.90).

Sociability

There were statistically significant main effects for type of work $F(4, 1917) = 2.53$, $p = 0.039$ and grading $F(7, 1917) = 2.60$, $p = 0.011$. Despite reaching statistical significance the actual difference in mean scores between groups was small, with the partial eta squared being 0.005 for type of work and 0.009 for grading. Post-hoc comparisons indicated that for type of work there were no significant differences between groups but for grading the mean score for Band 6 ($M = 4.81$, SD = 0.85) was highly significantly different from Band 8a ($M = 5.10$, SD = 0.84) and Band 8b ($M = 5.30$, SD = 0.78). Plus Band 5 ($M = 4.77$, SD = 0.92) was highly significantly different to Band 8a and 8b. No other differences were significant (Table 7).

The effect of grading on the Global EI and 4 factors was explored using a Pearson's product moment correlation coefficient. There was a statistically significant but small positive correlation between grade and Sociability, $r = 0.08$, $n = 1997$, $p \leq 0.01$.

Table 5
Differences in Self-control scores by grading (* $p \leq 0.05$).

Grading (agenda for change)	n	Self-control (M)	SD
Band 8a	118	5.09*	0.836
Band 4	38	5.06	0.774
Band 8c	22	5.00	0.867
Band 8b	62	5.00	0.875
Band 7	493	4.92	0.866
Band 6	739	4.82*	0.888
Band 5	312	4.81	0.917

Table 6
Differences in type of DR for the emotionality factor (** $p \leq 0.01$).

Type of DR	n	Emotionality (M)	SD
Angiographer	28	5.62	0.61
Mammographer	193	5.58**	0.74
MR	117	5.49	0.75
General	55	5.45	0.70
US	113	5.38	0.83
CT	61	5.36	0.93
Trauma	36	5.27	0.83
Nuclear Medicine	63	5.12**	0.90

Comparison with TEIQue-SF normative sample

There were statistically significant differences for age group between the radiographers and the normative sample (see Table 8) on global Trait EI, and all of the factors. Post-hoc comparisons indicated that the differences lay mainly with the 0–29 age group where radiographers scored more highly than the normative group for all but the emotionality factor. This factor however revealed differences between the 40–49 age group again in favour of the radiographer group.

There were highly statistically significant differences in gender between the radiographers and the normative sample (see Table 9) across global EI $F(3, 2844) = 39.5$, $p \leq 0.01$, well-being $F(3, 2844) = 30.9$, $p \leq 0.01$, self-control $F(3, 2844) = 36.1$, $p \leq 0.01$, emotionality $F(3, 2844) = 44.5$, $p \leq 0.01$ and sociability $F(3, 2844) = 6.6$, $p \leq 0.01$. The post-hoc test revealed differences between females across global and all factors but for males this was limited to global Trait EI, well-being and self-control. In all instances of significant difference the radiographers scored more highly than the normative sample.

Discussion

This research is the first to determine the profile of Trait EI within a large sample health service profession. The radiography profession scored higher in emotional intelligence than the normative sample drawn from a range of different professions and trades. This was particularly evident among females who make up 80% of the profession (HPC 2010), and those in the first decade of their professional lives. On this measure these radiographers have greater Well-being, so perceive themselves as successful and confident, cheerful and satisfied and tending to look on the bright side of life. They have greater Self-control so are better able to control their emotions, to withstand pressure and regulate stress and are reflective and less likely to give in to their urges.

They have greater Emotionality so they believe they are clear about their own and other people's feelings, capable of

Table 7
Differences between grading for the sociability factor (all at $p \leq 0.01$).

Grading (agenda for change)	n	Sociability score (M)	SD
Band 8b	62	5.30**^^	0.78
Band 8c	22	5.18	1.07
Band 8a	118	5.10*^^	0.84
Band 7	493	4.93	0.84
Band 6	739	4.81^^	0.85
Band 5	312	4.77***	0.92
Band 4	38	4.75	0.73

^^, **, ** These are all pair-wise comparisons with the same symbol being used to denote differences between pairs of values.

^^ Denotes significance at the 0.05 level.

^ Denotes significance at the 0.01 level.

* Denotes significance at the 0.05 level.

** Denotes significance at the 0.01 level.

Table 8Differences in global and factor scores between the normative and radiographer groups by age group (** $p \leq 0.01$, * $p \leq 0.05$).

Age	Rad (n)	Norm (n)	Global EI M (SD)		Well-being M (SD)		Self-control M (SD)		Emotionality M (SD)		Sociability M (SD)	
			Rads	Norm	Rads	Norm	Rads	Norm	Rads	Norm	Rads	Norm
18–29	433	631	5.21** (0.67)	4.95** (0.68)	5.73** (0.86)	5.39** (0.89)	4.76** (0.93)	4.50** (0.89)	5.31 (0.80)	5.02 (0.87)	4.79* (0.87)	4.80* (0.91)
30–39	439	119	5.26 (0.67)	5.09 (0.63)	5.74 (0.83)	5.50 (0.93)	4.83 (0.90)	4.62 (0.96)	5.40 (0.82)	5.20 (0.82)	4.86 (0.88)	4.99 (0.81)
40–49	532	45	5.36 (0.62)	5.06 (0.74)	5.79 (0.83)	5.40 (1.06)	4.99 (0.87)	4.84 (0.95)	5.48** (0.80)	5.03** (0.95)	4.97 (0.84)	4.80 (0.83)
50–59	525	8	5.26 (0.66)	5.25 (0.72)	5.70 (0.88)	5.53 (0.88)	4.90 (0.86)	5.11 (0.99)	5.34 (0.83)	5.25 (0.86)	4.87 (0.88)	4.91 (0.74)
60+	68	3	5.34 (0.64)	4.72 (0.75)	5.77 (0.70)	5.35 (0.74)	5.02 (0.84)	4.79 (0.97)	5.39 (0.81)	4.38 (0.92)	4.98 (0.87)	4.33 (1.22)

communicating their feelings to others, of having fulfilling personal relationships and capable of taking someone else's perspective. The presence of the Emotionality factor supports the previous work by Casselden,¹⁶ who found radiographers had greater 'empathic concern' and 'perspective taking' on the Interpersonal Reactivity Index, and Mackay,¹⁸ who found they scored more highly for Democratic and Caring traits on the empathy subscale of the OPQ. These are traits that would support the high level of interpersonal and intrapersonal communication skills required of radiographers.¹⁵ However the work of these authors use different measures and although ostensibly are describing empathy, further work would need to be undertaken to confirm this finding.

Type of diagnostic radiographer

There were unexpected differences found for type of DR. Whilst there are differences in the type of work undertaken by different types of DR the similarities might be considered to be greater than the differences.

There were significant differences between types of DR for Global EI, Well-being and Emotionality. Although the effect sizes were small across each, there was a consistent finding for NM Rads to achieve the lowest comparative scores. This suggests that nuclear medicine radiographers' perception of their EI is lower than that of other radiographer subspecialties. Angiographers and mammographers scored highly for Emotionality and Well-being with angiographers also scoring highly for global EI. It is unclear why this might be, as the basic education and training for all DR is the same, a BSc honours degree in diagnostic radiography. This might be related to different characteristics of the subspecialties such as the degree of focus on the technology or the relationship with the patient and this might attract different personalities. Anecdotal evidence suggest that NM Rads might have a greater focus on the technology and mammographers on their relationship with their patients but further research is required to try and explain this phenomenon.

A meta-analysis by Barrick, Mount, and Gupta³¹ found meaningful relationships between personality types and occupation using Holland's occupational types and Richardson *et al.*³² found several traits which linked personality of healthcare professionals with career satisfaction. So we might expect that when EI is conceptualised and measured as a personality trait³³ differences between types of DR could be as a result of differences in their personality. However further work is needed to explore the differences in job role and personality of radiographer subgroups. It

may be that people of a particular personality type seek out a certain type of radiography job or that a certain type of radiography job affects your personality type.

Diagnostic and therapy differences

Differences were identified between type of work for Sociability and Well-being. There were no significant differences found on Post-hoc tests between the categories of radiographer specified in this research; diagnostic, therapeutic, assistant practitioner and nuclear medicine technologist. This may be due to the unequal number of cases in each group. Analysis of the raw data revealed a coding problem in the online questionnaire which might have confused respondents and limited the numbers collected in each category.

Previous work by Mackay¹⁸ and Casselden¹⁶ has shown differences between the two main radiography disciplines on empathy related traits. Empathy can be defined as a combination of perspective taking, compassionate care, and 'standing in the patient's shoes'.³⁴ In the Trait emotional intelligence model the elements which link to empathy such as 'trait empathy', being able to see someone else's perspective and 'emotional perception', being clear about own and other people's feelings, are called facets. These two facets comprise two thirds of the Emotionality factor. No differences were found in Emotionality between the disciplines. However the 'short form' of the Trait EI measure does not provide access to the facet level and further work would be needed with the 'full form' of the Trait EIQue to enable meaningful conclusions to be drawn.

Grading

This variable produced the greatest number of significant results with differences for global EI and three of the four factors which would suggest that Trait EI is related to the grade of radiographer. For Global EI and Well-being the Post-hoc tests failed to identify any differences between groups. This may be due to the unequal numbers across the groups and the conservative nature of the Tukey test. However for Self-control and Sociability the differences lay between groups at the top and bottom ends of the agenda for change grading scale. This relationship is further supported by the significant, albeit small, correlation found between grade and the Sociability factor. Taken together these findings suggest a link between the EI and leadership as the higher grades (8a, 8b and 8c) represent the leaders in the profession. This supports the findings of Walter, Cole and Humphrey³⁵ who found considerable support

Table 9Differences in global and factor scores between the normative and radiographer groups by gender (** $p \leq 0.01$).

Gender	Groups (n)	Global M (SD)	Well-being M (SD)	Self-control M (SD)	Emotionality M (SD)	Sociability M (SD)
Male	Norm (432)	5.05** (0.69)	5.46** (0.90)	4.73** (0.94)	5.00 (0.87)	4.94 (0.88)
	Rads (307)	5.23** (0.70)	5.66** (0.90)	5.06** (0.91)	5.14 (0.88)	4.96 (0.88)
Female	Norm (416)	4.94** (0.68)	5.37** (0.90)	4.42** (0.88)	5.11** (0.87)	4.71** (0.89)
	Rads (1690)	5.29** (0.63)	5.76** (0.83)	4.85** (0.88)	5.43** (0.79)	4.87** (0.86)

for the relationship between EI and leadership across the three areas in leadership of emergence, behaviour and effectiveness.

It is recognised that agenda for change banding is a proxy measure for leadership and that in these upper levels there will be managers and leaders and that the two do not always coincide. It is suggested that the study be repeated with more robust measures of leadership.

It should also be noted that this research utilised a self-selected sample which may have included more motivated individuals from within the profession and might have limited its representativeness.

In conclusion the Trait EI of the profession of radiography has been profiled and shows differences between the type of DR, with NM Rads scoring the lowest of the subspecialties, however, no differences emerged between the diagnostic and therapeutic radiographers scores. Further research is needed to explore why these differences were present and why the previously identified differences did not materialise with this measure. Radiographers have a higher perceived level of Trait EI than a normative sample group. There is further support for the relationship between leadership and EI with radiography leaders in the upper agenda for change bandings scoring higher than those in the lower bandings. This study has enabled benchmarking of one healthcare profession and further research is indicated to survey and compare other professions to help further our understanding of emotional intelligence.

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