RESEARCH ARTICLE

Emotional Intelligence and Personality Traits as Predictors of Occupational Therapy students' Practice Education Performance: A Cross-Sectional Study

Ted Brown[1]*†, Brett Williams[2] & Jamie Etherington[1]

[1]Department of Occupational Therapy, Monash University - Peninsula Campus, Frankston, Victoria, Australia

[2]Department of Community Emergency Health and Paramedic Practice, Monash University - Peninsula Campus, Frankston, Victoria, Australia

Abstract

This study investigated whether occupational therapy students' emotional intelligence and personality traits are predictive of specific aspects of their fieldwork performance. A total of 114 second and third year undergraduate occupational therapy students (86.6% response rate) completed the *Genos Emotional Intelligence Inventory* (Genos EI) and the *Ten-Item Personality Inventory* (TIPI). Fieldwork performance scores were obtained from the *Student Practice Evaluation Form Revised* (SPEF-R). Linear regressions were completed with the SPEF-R domains being the dependent variables and the Genos EI and TIPI factors being the independent variables. Regression analysis results revealed that the Genos EI subscales of Emotional Management of Others (EMO), Emotional Awareness of Others (EAO), Emotional Expression (EEX) and Emotional Reasoning (ERE) were significant predictors of various domains of students' fieldwork performance. EAO and ERE were significant predictors of students' Communication Skills accounting for 4.6% of its variance. EMO, EAO, EEX and ERE were significant predictors of students' Documentation Skills explaining 6.8% of its variance. EMO was a significant predictor of students' Professional Behaviour accounting for 3.2% of its variance. No TIPI factors were found to be significant predictors of the SPEF-R domains. Occupational therapy students' emotional intelligence was a significant predictor of components of their fieldwork performance while students' personality traits were not. The convenience sampling approach used, small sample size recruited and potential issue of social desirability of the self-reported Genos EI and TIPI data are acknowledged as study limitations. It is recommended that other studies be completed to investigate if any other relevant constructs or factors are predictive of occupational therapy students' fieldwork performance.

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Keywords

students; fieldwork; practice education; emotional intelligence; personality

***Correspondence**

Ted Brown, Department of Occupational Therapy, Monash University - Peninsula Campus, Building G, 4th floor, PO Box 527, Frankston, Victoria, Australia, 3199.

†Email: ted.brown@monash.edu

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Introduction

Fieldwork is an integral component in the professional education of occupational therapy students by providing opportunities for them to apply theoretical knowledge and practical skills in clinical practice settings. Practice placements are also reported as having a significant influence in the development of occupational therapy students' professional abilities, clinical reasoning and professional competencies (Clarke *et al.*, 2015).

This paper explores whether measures of emotional intelligence and personality traits in occupational therapy students can be used to predict practice education performance, as measured by the *Student Practice Evaluation Form Revised* (SPEF-R) (Division of Occupational Therapy, University of Queensland, 2008). This is a criterion-referenced instrument completed by fieldwork supervisors specifically developed to assess occupational therapy students' performance in practice education (including professional behaviour and communication skills) (Rodger *et al.*, 2016). The SPEF-R is also used as a tool to provide summative feedback to students in the practice education context.

The findings of such a study can form the basis for improved understanding of the ways in which emotional skills and personality traits of occupational therapy students may influence and impact practice performance (Rodger *et al.*, 2011; Andonian, 2013). The results also can provide a framework for reflection on students' professional behaviour, and their self-management, collaboration and communication skills. The findings may assist practice educators in identifying students at risk of performance difficulties and opportunities to introduce appropriate support mechanisms in education curricula.

Background literature

In the educational preparation to be an occupational therapist, fieldwork practice is recognized as one of the dominant influences on students' sense of professional identity (Clarke *et al.*, 2015). For students to function effectively in academic and clinical settings, students require the necessary skills for understanding their own and others' emotions (Jamison and Dirette, 2004). Andonian (2013) states that emotional intelligence is an "essential skill to examine" during occupational therapy students' field placements because emotional stability is crucial in working to successfully engage with clients with a range of disabilities and their families.

Emotional intelligence (EI) represents an array of non-cognitive skills, capabilities and competences, such as professionalism, empathy, integrity, that influence a person's ability to cope with environmental demands and pressures (Talarico *et al.*, 2013). Over the last two decades the concept has gained traction, particularly within the academic and healthcare worlds where "the ability to monitor one's own and other's feelings, to discriminate among them and use this information" is viewed as essential in the guiding of clinicians' thinking and actions (Grewal and Salovey, 2005). Insight into one's own emotional competencies is also integral to the promotion of self-awareness, improved ability to work with fellow team members, and the building of supportive bonds with colleagues and clients (Gavriel, 2015). In the occupational therapy literature, EI has been succinctly described as the "therapeutic use of self", in which the practitioner uses personality traits, perception and judgement as part of the therapeutic process (Punwar and Peloquin, 2000).

From a theoretical perspective, the constructs of EI and personality traits are held to be "generally indistinguishable" (Davies *et al.*, 1998; Ciarrochi *et al.*, 2000) with EI presented as a fusion of emotional stability, personality type and interpersonal skills (Bar-On, 2000). Affective aspects of personality (for example, extraversion and agreeableness) and interpersonal skills (for example, the ability to handle conflict and to communicate succinctly) are fully integrated as part of EI (Petrides *et al.*, 2007). The constructs are considered attractive predictive tools in researching the role of general emotions in the workplace (Van Rooy and Viswesvaran, 2004). Interest in EI capabilities and personality style is evident across a range of health disciplines including nursing (Chan *et al.*, 2014), medicine (Libbrecht *et al.*, 2014), pharmacy (Hardigan and Cohen, 1999) and physiotherapy (Gunvor and Gyllensten, 2000). The empirical evidence suggests they are valid constructs for predicting academic and clinical education performance.

McKenna and Mellson (2007; 2013) have highlighted the importance of emotionally intelligent occupational therapists in the delivery of holistic, client-centred practice. However, compared with research in other disciplines, where the links between EI and contemporary healthcare roles are well established, the role of EI and personality trait in occupational therapy practice has received relatively little attention to date. In a study completed by Caruso that investigated

the degree of EI required in various professions, occupational therapy was ranked 12th in a list of 37 disciplines, from greatest to lowest, for the level of EI skills needed for a satisfactory and successful career (Caruso, 1999). This indicates that EI is a relevant factor to successful occupational therapy practice when engaging with clients, their families and other health care professionals.

Research from medicine, nursing and psychology emphasizes the relevance of EI skills and personality traits in developing clinical reasoning processes, professional development and communication between colleagues and clients and their families (Beauvais *et al.*, 2011; Chaffey *et al.*, 2012). In one study of the personality type of occupational therapy students, it was found that the majority shared concerns for the feelings of others and a need for structure and personal validation, with students placing a high premium on personal connectedness and a dependable working environment (Jamison and Dirette, 2004).

There is also evidence that EI affects outcomes in professional relationships, work productivity and problem solving (Libbrecht *et al.*, 2014). In their research on physiotherapy practitioners, Gunvor and Gyllensten (2000) identified a direct connection between enabling clients and enhancing professional practice through EI, with benefits for health communication and clinical reasoning. Within nursing too, a positive relationship has been reported between EI and clinical performance with significant correlations in the areas of teaching/collaboration, planning/evaluation, interpersonal relations and communication and professional development (Beauvais *et al.*, 2011).

Hurley and Linsley (2012) acknowledge that healthcare practitioners who apply EI skills are more likely to provide evidence-based, yet personalized, care to those in their care. High levels of EI also allow the practitioner to better look after themselves in stressful and challenging practice environments. Accreditation authorities (including the National Curriculum for England, Wales and Northern Ireland and the Accreditation Council for Graduate Medical Education in the United States) recognize the importance of EI and routinely assess EI throughout the education process (Weng *et al.*, 2008).

Andonian (2013) examined the link between EI, self-efficacy and occupational therapy students' ($n = 199$) fieldwork performance from 36 American education programs. Students completed the *Mayer–Salovey–Caruso Emotional Intelligence Test* (MSCEIT) and the Student Confidence Questionnaire, and their fieldwork performance was assessed by the *Fieldwork Performance Evaluation* (FWPE). The MSCEIT generates a total EI score plus four EI skill branches: perceiving emotions in oneself and others, using emotions to facilitate problem solving, understanding emotions and managing emotions (Mayer *et al.*, 2002). Andonian (2013) reported that the MSCEIT total score was not significantly correlated with total FWPE score. However, two of the MSCEIT branches had significant correlations with two of the FWPE subscale scores: (i) the MSCEIT branch score for "understanding emotions" was significantly correlated with the FWPE "intervention" subscale score ($\text{rho} = 0.160$, $p < 0.05$); and (ii) the MSCEIT branch score for "managing emotions" was significantly correlated with the FWPE subscale score related "communication" ($\text{rho} = 0.155$, $p < 0.05$) (Andonian, 2013).

In contrast to the findings of Andonian, Gordon-Handler (2009) investigated the relationship between EI and occupational therapy students' ($n = 45$) fieldwork performance. Students' EI was measured using the *Emotional Competence Inventory*, and their fieldwork performance was measured using the FWPE. However, no significant links were obtained between students' EI and their fieldwork performance. Given the small sample size, it is possible that this study was under-powered statistically.

While the Health and Care Professions Council Standards of Proficiency (Health and Care Professions Council, 2013) for occupational therapists makes no explicit reference to EI, the requirement to "build and sustain professional relationships" reflects the need for emotionally intelligent occupational therapists who are able to form appropriate partnerships with colleagues and clients, are reflective in their practice and understand group dynamics. In the *Australian Minimum Competency Standards for New Graduate Occupational Therapists* (Occupational Therapy Australia, 2010), two of the key competency categories are "Professional Attitudes and Behaviour" and "Professional Communication". This highlights the importance of EI for current students when they later graduate as new clinicians. The assessment of EI skills affords opportunities instilling in occupational therapy students an awareness of how emotions are displayed and regulated can have a direct bearing on the forging of good working relationships with colleagues and clients

(Lopes *et al.*, 2006). These are key competencies that accrediting and registration bodies look for in practising professionals.

Brackett *et al.* (2011) completed a review of the EI literature and its relationship to personal, social, academic and workplace success. In particular, higher levels of EI in employees were found to have significant positive associations with interactions with fellow colleagues, approaches used to manage conflict and stress and overall job performance (Lopes *et al.*, 2006). Staff with higher levels of EI received higher ratings from peers and managers for interpersonal facilitation, leadership potential, stress tolerance and resiliency (Brackett *et al.*, 2011; Cote and Miners, 2006). This could be extrapolated to occupational therapy students completing fieldwork placements where they are assessed on fundamentals of practice, management of services, communication skills and professional behaviour using the FWPE. Given they are completing fieldwork placements to be future health care professionals, it could be hypothesized that students with higher levels of EI would succeed in their given workplaces, but this prediction needs to be empirically proven.

In a discipline where occupational therapists are often faced with difficult, sometimes traumatic, experiences, it is important to nurture the emotionally intelligent occupational therapist whose reflective monitoring of both their own and others' emotions is essential for effective collaborative practice (McKenna and Mellson, 2013; Poulsen *et al.*, 2014). It has been suggested that higher levels of EI ability are a protective factor against stress and depression, and promote emotional functioning and well-being (Ciarrochi *et al.*, 2000). Other reported benefits include improved interaction with professional colleagues and service users, with EI skills contributing to leadership skills, creative and flexible approaches to problem-solving and improved work satisfaction (Weng *et al.*, 2011; Andonian, 2013). "Emotional stability" may also mitigate the dangers of the high-anxiety personality trait in occupational therapy practice (Tan *et al.*, 2004).

It is important to ascertain whether the EI skills and personality traits of occupational therapy students and whether they can be used to predict students' practice education performance (McKenna and Mellson, 2013). This purpose of this study was to explore whether measures of emotional intelligence and personality traits in occupational therapy students can be used to predict fieldwork performance.

Method

Design

A self-report survey design was used to collect data for the project. A sample of convenience approach was used to recruit participants.

Participants

The participants were 114 occupational therapy students enrolled in the 4-year Bachelor of Occupational Therapy (Honours) course at Monash University in Australia. Students undertake annual fieldwork placements, typically occurring in the second, third and fourth years of study and varying in length from 4 to 9 weeks. Students are expected to complete 1000 hours of fieldwork experience to meet the requirements of the Occupational Therapy Board of Australia / Australian Health Practitioner Regulation Agency and the World Federation of Occupational Therapists standards.

Instrumentation

Demographic information about the participants (including year level, gender and age) was collected via an 11-item questionnaire. The *Genos Emotional Intelligence Inventory* (Genos EI) (Gignac, 2008) was used to gather data about participants' self-reported aspects of their emotional intelligence. The Genos EI measures how often respondents report emotionally intelligent behaviour in the workplace according to seven constructs related to EI: Emotional Self-Awareness (ESA); Emotional Expression (EEX); Emotional Awareness of Others (EAO); Emotional Reasoning (ERE); Emotional Self-Management (ESM); Emotional Management of Others (EMO); and Emotional Self-Control (ESC). The 31 items are scored on a 5-point Likert scale from "Almost never" to "Almost always" and generates seven subscale scores (e.g. scores for ESA, EEX, EAO, ERE, ESM, EMO and ESC) and a total EI score. Assessment of the score is presented as "strengths" and "opportunities for development".

The Genos EI has been used with large workplace samples across the United States, Canada and Australia. Evidence of the construct validity and factor structure of Genos EI has been reported by Gignac (2005, 2010). The internal consistency reliabilities (Cronbach's alpha) of the Genos EI have been reported as ranging from 0.71 to 0.85. Test-retest correlations of 0.83 and 0.72 for Genos EI total scores, based on 2-

month and 6-month time intervals, were reported by Palmer *et al.* (2009).

The *Ten-Item Personality Inventory* (TIPI) (Gosling *et al.*, 2003) is a brief measure of five personality type constructs: Extraversion; Agreeableness; Conscientiousness; Emotional Stability; and Openness to Experience. The ten items are scored on a 7-point Likert scale ranging from "Disagree strongly" to "Agree strongly". A mean score for each of the personality trait subscales is generated. A Cronbach's alpha score of 0.72 has been reported as well as evidence of test-retest probability for the TIPI (Gosling *et al.*, 2003). The TIPI also has had evidence of its convergent and discriminant validity reported which is within the accepted criteria for construct validity (Gosling *et al.*, 2003). Construct validity evidence of the TIPI has also been reported by Hoffmans *et al.* (2008) and Muck *et al.* (2007).

The *Student Practice Evaluation Form Revised* (Division of Occupational Therapy, University of Queensland, 2008) is a competency-based evaluation tool to assess occupational therapy students' performance in practice education (Turpin *et al.*, 2011). It measures eight domains: Professional Behaviour; Self-Management; Co-worker Communication; Communication Skills; Documentation; Information Gathering; Service Provision; and Service Evaluation. Students' performance for each of these items is rated on a 5-point scale from "1 Performs unacceptably" to "5 Performs with distinction" that generates an overall total score for each of the eight competency domains. Fieldwork education supervisors use the SPEF-R to evaluate students' performance when they complete practice education placements.

The instrument has established construct validity and test-retest reliability (Rodger *et al.*, 2014; Turpin *et al.*, 2011). It is used by all Australian occupational therapy university programs when students complete fieldwork placements and is completed by practice education supervisors about students' performance and skills. Fieldwork supervisors attend one-day education sessions where they are trained in the administration, scoring and interpretation of the SPEF-R.

Data analysis

The Genos EI, TIPI and SPEF-R scores were entered onto an SPSS DATABASE (Version 20) (IBM Corp. Released 2011. IBM SPSS Statistics for Windows, Version 20.0. Armonk, NY: IBM Corp.). The Genos EI and TIPI sub-scale scores were then correlated with the SPEF-R competency domain scores using Spearman rho correlations. To explore possible predictive relationships with the Genos EI and TIPI scores (being the independent variables) and the SPEF-R domain scores (being the dependent variables), standard multiple linear regression analyses were completed. An independent variable was only included in the regression analysis if it was significantly correlated with the dependent variable. In other words, all the independent variables that significantly correlated with the dependent variable were entered into the regression equation simultaneously. Preliminary analyses were completed to ensure that there were no violations of the assumptions of normality, linearity, multicollinearity and homoscedasticity. Results were considered statistically significant at the 0.05 alpha level.

Procedures

Ethics approval for the project was obtained from the Monash University Human Research Ethics Committee (Project Number: CF15/10 – 2015000008). At the conclusion of lectures for each year level, students were invited to participate in the study. Students were provided with an explanatory statement and were informed that participation was voluntary and anonymous. Respondents were informed of the purpose of the study, the voluntary nature of their participation and of the procedures to ensure their anonymity in all published outputs.

A non-teaching member of staff facilitated the process to avoid lecturer-student power relations, and students were asked to complete in person a questionnaire containing demographic questions, the Genos EI and TIPI scales. The questionnaire took approximately 20 minutes to complete, and students did not sign a consent form because consent on the part of the students was implied by its completion and return. Students completed the questionnaire approximately 2 months prior to starting their fieldwork placements. No data was identifiable.

The SPEF-R domain scores were obtained from the completed forms submitted by students' fieldwork supervisors after they completed a practice education placement. Only the final SPEF-R scores were extracted and used in the analysis. Mid-way placement SPEF-R ratings were not used. All fieldwork supervisors who utilize the SPEF-R complete a one day face-to-face

course on its use, scoring and interpretation. The department fieldwork coordinator also consults with individual fieldwork supervisors about the scoring of the SPEF-R as well.

Results

Demographic results

A total of 114 second and third year undergraduate occupational therapy students participated in the study (a response rate of 86.6%). A large number of participants were enrolled full-time in the second year of study ($n = 70$, 61.4%) and there was also good representation of full-time students from the third year ($n = 44$, 38.6%). The majority of participants were women (88.9%) between the ages of 20 and 24 (84.6%). All students were enrolled on a full-time basis. Given the high response rate to the survey (e.g. 86.6%), the sample are highly representative of the entire second and third year student cohorts when the data was collected in relation to age and gender. Second year students completed a 4-week fieldwork placement and third-year students completed a 6-week fieldwork placement at the end of their academic semester. SPEF-R domain scores were obtained from forms submitted by students' fieldwork supervisors based on their completion of these placements.

Table I. ISPEF-R, Genos EI and TIPI Scale Scores ($n = 114$)

	Mean	Standard deviation
SPEF-R Domains		
Professional behaviour	19.35	3.44
Self-management skills	18.61	3.31
Co-worker communication	10.80	1.99
Communication skills	16.08	3.88
Documentation skills	11.05	2.15
Information gathering	21.27	4.84
Service provision	20.44	7.99
Service evaluation	10.27	6.03
Total SPEF-R scale score:	127.88	27.78
TIPI Subscales		
Extraversion	9.03	2.51
Agreeableness	10.18	1.82
Conscientiousness	10.75	2.23
Emotional stability	9.66	2.57
Openness to experiences	10.16	2.07
Genos EI Subscales		
Emotional self-awareness	15.92	2.11
Emotional expression	18.83	2.88
Emotional awareness of others	16.50	2.22
Emotional reasoning	19.21	2.45
Emotional self-management	18.71	2.85
Emotional management of others	16.50	2.14
Emotional self-control	15.24	2.44
Emotional intelligence total score	119.86	13.21

SPEF-R, Student Practice Evaluation Form Revised; Genos EI, Genos Emotional Intelligence Inventory; TIPI, Ten-Item Personality Inventory.

Student Practice Evaluation Form Revised, Genos Emotional Intelligence Inventory and Ten-Item Personality Inventory scores

The mean and standard deviations for the SPEF-R, Genos EI and TIPI subscale scores are reported in Table I. The highest mean scoring SPEF-R domains were "Information Gathering" ($\bar{x}$ 21.27; SD 4.84), "Service Provision" ($\bar{x}$ 20.44; SD 7.99) and "Professional Behaviour" ($\bar{x}$ 19.35; SD 3.44). The highest Genos EI mean subscale scores were recorded on "Emotional Reasoning" ($\bar{x}$ 19.21; SD 2.45), "Emotional Expression" ($\bar{x}$ 18.83; SD 2.88) and "Emotional Self-Management" ($\bar{x}$ 18.71; SD 2.85). "Conscientiousness" ($\bar{x}$ 10.75; SD 2.23) and "Agreeableness" ($\bar{x}$ 10.18; SD 1.82) recorded the highest scores for personality traits.

Correlation results

The results revealed several significant associations between the Genos EI variables and the TIPI subscales at the $p < 0.05$ and $p < 0.01$ levels (Table II). No significant associations were found between the TIPI subscales and SPEF-R domains. Several significant correlations were obtained between the Genos EI variables and SPEF-R domains (Table III). The correlations between the Genos EI subscales are reported in Table IV.

Regression results between Student Practice Evaluation Form Revised domains and Genos Emotional Intelligence Inventory subscales

Regression analysis results revealed that the Genos EI subscales of EMO, EAO, EEX and ERE were significant predictors of various domains of students' fieldwork performance as measured by the SPEF-R:

- EAO ($\beta = 0.160$, $p = 0.17$) and ERE ($\beta = 0.149$, $p = 0.20$) were found to be significant predictors of students' "Communication Skills" as a regression

Table II. Spearman rho correlations between Genos Emotional Intelligence Inventory (Genos EI) subscales and Ten-Item Personality (TIPI) Inventory subscales ($n = 114$)

	Extraversion	Agreeableness	Conscientiousness	Emotional Stability	Openness to Experiences
Emotional Self-Awareness (ESA)	0.196*	0.245**	0.267**	0.112	0.167
Emotional Expression (EEX)	0.259**	0.111	0.256**	0.168	0.209*
Emotional Awareness of Others (EAO)	0.216*	0.236*	0.252**	0.114	0.384**
Emotional Reasoning (ERE)	0.227*	0.135	0.267**	0.109	0.153
Emotional Self-Management (ESM)	0.207*	0.236*	0.183*	0.304**	0.186*
Emotional Management of Others (EMO)	0.175	0.199*	0.255**	0.097	0.224*
Emotional Self-Control (ESC)	0.297**	0.231*	0.251**	0.357**	0.266**
Emotional Intelligence Total Score	0.297**	0.247**	0.323**	0.238**	0.280**

ESA, Emotional Self-Awareness; EEX, Emotional Expression; EAO, Emotional Awareness of Others; ERE, Emotional Reasoning; ESM, Emotional Self-Management; EMO, Emotional Management of Others; ESC, Emotional Self-Control.

*$p < 0.5$;

**$p < 0.01$

Table III. Genos Emotional Intelligence Inventory (Genos EI) subscale correlations with the Student Practice Evaluation Form Revised (SPEF-R) domains ($n = 114$)

SPEF-R	ESA	EEX	EAO	ERE	ESM	EMO	ESC	TOTAL
SPPB	0.114	0.068	0.109	0.143	−0.041	0.213*	0.049	0.105
SPSM	0.100	0.129	0.103	0.203	0.017	0.128	−0.020	0.108
SPCWC	0.154	0.079	0.238*	0.179	0.040	0.225*	0.073	0.163
SPCS	0.110	0.041	0.183	0.241*	0.019	0.223*	0.025	0.132
SPDOC	0.141	0.252*	0.229*	0.243*	0.175	0.274**	0.162	0.281**
SPIG	0.081	0.036	0.131	0.100	−0.013	0.183	0.075	0.102
SPSP	0.062	0.172	0.147	0.148	0.069	0.199	−0.026	0.139
SPEE	0.017	0.090	0.067	0.123	0.079	0.195	0.005	0.124
SPEF-R TOTAL	0.069	0.097	0.149	0.171	0.044	0.225*	0.022	0.138

ESA, Emotional Self-Awareness; EEX, Emotional Expression; EAO, Emotional Awareness of Others; ERE, Emotional Reasoning; ESM, Emotional Self-Management; EMO, Emotional Management of Others; ESC, Emotional Self-Control; Total, Emotional Intelligence Total Score; SPPB, Professional Behaviour; SPSM, Self-Management; SPCWC, Co-worker Communication; SPCS, Communication Skills; SPDOC, Documentation; SPIG, Information Gathering; SPSP, Service Provision; and SPEE, Service Evaluation; SPEF-R TOTAL, SPEF-R total score

*$p < 0.5$;

**$p < 0.01$

Table IV. Genos Emotional Intelligence Inventory (Genos EI) subscale correlations ($n = 114$)

	ESA	EEX	EAO	ERE	ESM	EMO	ESC	EITOT
ESA	1.000	0.500**	0.632**	0.476**	0.478**	0.484**	0.537**	0.733**
EEX	0.500**	1.000	0.516**	0.383**	0.740**	0.473**	0.570**	0.802**
EAO	0.632**	0.516**	1.000	0.461**	0.525**	0.629**	0.581**	0.780**
ERE	0.476**	0.383**	0.461**	1.000	0.403**	0.443**	0.355**	0.649**
ESM	0.478**	0.740**	0.525**	0.403**	1.000	0.426**	0.675**	0.826**
EMO	0.484**	0.473**	0.629**	0.443**	0.426**	1.000	0.549**	0.717**
ESC	0.537**	0.570**	0.581**	0.355**	0.675**	0.549**	1.000	0.799**
EITOT	0.733**	0.802**	0.780**	0.649**	0.826**	0.717**	0.799**	1.000

ESA, Emotional Self-Awareness; EEX, Emotional Expression; EAO, Emotional Awareness of Others; ERE, Emotional Reasoning; ESM, Emotional Self-Management; EMO, Emotional Management of Others; ESC, Emotional Self-Control; EITOT, Emotional Intelligence Total Score

*$p < 0.5$;

**$p < 0.01$

model, accounting for 4.6% of its total variance ($R^2 = 0.046$, F(2,85) = 3.099, $p = 0.050$);

- EMO ($\beta = 0.211$, $p = 0.138$), EAO ($\beta = -0.027$, $p = 0.852$), EEX ($\beta = 0.153$, $p = 0.228$) and ERE ($\beta = 0.062$, $p = 0.613$) were found to be significant predictors of students' "Documentation Skills" ($p = 0.025$) as a regression model, explaining 6.8% of its total variance ($R^2 = 0.068$, F(4,83) = 2.578, $p = 0.043$);
- EMO ($\beta = 0.207$, $p = 0.053$) was determined to be a significant predictor of students' "Professional Behaviour," accounting for 3.2% of its total variance ($R^2 = 0.032$, F(1,86) = 3.844, $p = 0.053$); and
- EMO ($\beta = 0.216$, $p = 0.044$) was determined to account for 3.5% of the total variance of the "SPEF-R total score" ($R^2 = 0.035$, F(1,86) = 4.188, $p = 0.044$).

A regression model was run with the SPEF-R domain of "Co-worker Communication" as the dependent variable and the Genos EI subscales of EAO and EMO as the independent variables, but the regression model did not show statistical significance. Therefore, no significant predictors of students' "Communication with Co-workers" were identified.

Regression results between Student Practice Evaluation Form Revised domains and Ten-Item Personality Inventory subscales

Because no significant correlations were found between the TIPI subscales and SPEF-R domains, therefore regression analyses between these sets of independent and dependent variables were not completed. In other words, the personality traits of occupational therapy students (as measured by the TIPI) were not found to be significant predictors of their fieldwork performance (as measured by the SPEF-R).

Discussion

This study investigated the potential predictive value of EI variables and personality traits of occupational therapy students' practice education performance at an Australian university. In this study, EI was found to be a positive predictor of elements of fieldwork performance as measured by the SPEF-R, a criterion-referenced assessment tool developed specifically to provide formative and summative feedback for occupational therapy students. A key finding was that the EI variables of EMO, EAO, EEX and ERE were positively related to the SPEF-R fieldwork performance indicators of "Professional Behaviour", "Communication Skills" and "Documentation".

This is consistent with other research where an understanding of one's own and others' emotions was found to be related to communication and performance skills (Andonian, 2013). For example, in a study of EI, self-efficacy and fieldwork performance involving 199 occupational therapy students from 36 American occupational therapy courses, Andonian (2013) determined that some elements of EI were significantly associated with components of students' fieldwork performance (as measured by the FWPE). The FWPE is similar in purpose to the SPEF-R, but is used primarily in the United States. Specifically, the EI ability of "understanding emotions" was significantly correlated with students' intervention skill proficiency scores, and the EI component of "managing emotions" was significantly related to students' communication skills exhibited during fieldwork placements. It should be noted that only students' FWPE subscale scores were statistically significantly correlated with EI factors and not the FWPE total score. Moreover, when students with low and high EI scores were compared, no significant differences between the two student groups on their FWPE subscale scores were obtained (Andonian, 2013).

Gordon-Handler (2009) completed a study where the EI of a group of 45 entry-level Masters occupational therapy students from the United States was assessed from both the fieldwork supervisors' perspective of the student and students' ratings of themselves using the *Emotional Competence Inventory*. The students' fieldwork performance was assessed using the FWPE. No significant relationship was found between students' self-ratings of EI and the fieldwork supervisor EI ratings of the student. Similarly, no significant association was noted between students' self-ratings of EI and clinical performance (as measured by the FWPE subscale and total scores) while completing fieldwork placements. However, a positive relationship was found between supervisors' ratings of students' EI and fieldwork performance (Gordon-Handler, 2009)

The understanding of emotions links directly with the requirement for occupational therapy students to be client-centred in their practice, to genuinely collaborate with clients and work with colleagues to create a

positive working environment (Coates and Crist, 2004). Higher levels of EI also foster the attributes of professionalism, whereby occupational therapists demonstrate practice that is ethical, positive and collaborative (Brackett *et al.*, 2011; Taylor *et al.*, 2011). Through the completion of fieldwork placements, students' knowledge and learning is developed and applied to the assessment and intervention processes used by occupational therapists in their work with individuals, families, groups and communities. The ability to manage one's own emotions and those of others has been shown to be directly related to developing client-centred relationships (Tickle-Degnen, 2002).

The correlation of the management of one's own and others' emotions with communication skills indicates that strong EI skills create a positive working environment where individuals are understanding of others' feelings in the workplace and are motivated to achieve work-related goals (Brackett *et al.*, 2011; Hanson, 2011). The finding that emotional reasoning was predictive of communication and documentation skills suggests that asking others how they feel about different solutions and demonstrating to colleagues that their feelings have been considered in decisions made at work are beneficial for a positive working environment. Staff members who demonstrate an understanding of others' feelings in the workplace are also more likely to be satisfied with their careers (Weng *et al.*, 2011). EI skills may also provide an ability for students to reflect and document their observations while completing fieldwork placements.

Emotional intelligence skills are also supportive of career development where the evidence is that strong leadership skills are linked to high EI scores with those individuals assuming leadership, supervisory and management roles (Romanelli *et al.*, 2006). Studies have also reported that those individuals with well-developed EI skills perform well in their initial careers and are also more likely to be well regarded by co-workers and managers (Cote and Miners, 2006; Brackett *et al.*, 2011). Where EI skills are lacking, evidence from the medical profession indicates that the EI skill set can be taught and learned (Lewis *et al.*, 2005) and altered through targeted undergraduate training programmes with structured educational sessions to increase students' self-awareness of their own EI (Cherry *et al.*, 2012).

This has implications for practice where occupational therapy students are expected to negotiate, collaborate and co-operate appropriately with co-workers and clients, actively participate in workplace communications and respond to constructive feedback positively (Diane, 2003; Tan *et al.*, 2004). Students' self-management skills are especially significant in occupational therapists' daily practice where they are required to effectively manage their own time, assume responsibility for their own learning, demonstrate initiative and assume responsibility for actions taken (Hanson, 2011).

Also, the ability to recognize and manage the signs of stress in oneself reduces the risk of "burn out", a condition to which occupational therapists are particularly susceptible as their clinical roles require close interaction with clients who often present with distressing conditions (Poulsen *et al.*, 2014). Identifying students' strengths and weaknesses provides opportunities for occupational therapy curricula to offer students with poor self-appraisal skills remedial educational initiatives that support the development of coping and self-recognition skills. Examples of educational activities that could provide these opportunities are the use of simulated patients who provide immediate feedback; near-peer learning experiences where more senior students provide coaching feedback to more junior students; or the video-taping of students' performance in mock scenarios and then getting students to view the recording and self-reflect on their performance.

In this study, students' personality traits (as measured by the TIPI) were found to be not predictive of fieldwork practice performance (as measured by the SPEF-R). However, research elsewhere has highlighted the value of personality traits in identifying students' strengths and weaknesses in the context of their clinical practice (Doherty and Nugent, 2011). The finding that Conscientiousness and Agreeableness scored most highly among the samples of occupational therapy students indicates the prevalence of hard working, self-disciplined, trusting and cooperative individuals with the necessary attributes for professional practice.

This reflects the findings of Hurt *et al.* (2013) in their study of therapists who specialized in working with children diagnosed with autism. They found that Conscientiousness and Agreeableness were positively associated with Professional Efficacy and negatively correlated with Cynicism. This suggests these positive personality traits are particularly suited for the demanding work role of occupational therapists. They also contend that therapists with higher levels of

Conscientiousness traits (such as self-discipline and emotional control) may be more effective in clinical environments and more satisfied in their jobs. However, they also found that the levels of perceived personal and professional support partially mediated the effect of personality traits on job satisfaction. This indicates the importance of support initiatives in occupational therapy curricula targeted at identifying and counselling students who perform poorly in fieldwork placements.

Research of the differences in personality in occupational therapy students also enlightens students about how these differences may manifest themselves in their practice (Hardigan and Cohen, 1999). As an integral component of the EI construct, it is recommended that future studies investigating the role of emotional skills within fieldwork practice incorporate personality traits. The significant relationship between EI and fieldwork performance suggests there may be merit in including EI skills in the preparation for applying to occupational therapy courses. This has been advocated by research in the field of medicine where EI was found to be predictive of interpersonal aspects of medical work (Libbrecht *et al.*, 2014). Grice (2014) supports the use of multiple mini-interviews for occupational therapy admissions where non-cognitive attributes such as self-control, perseverance and motivation in a variety of scenarios can be assessed.

Study limitations and future research

The small sample size in which participants were almost exclusively female and between 20 and 24 years of age, and the fact that the results are drawn from one university, means that caution must be exercised when generalizing the findings. Convenience sampling is another acknowledged limitation. The Genos EI and TIPI are both self-report scales and as with any such scale, they can be prone to the issue of social desirability in relation to participants responding in a biased manner. Another notable limitation is the fact that the combination of the second and third year student participant groups who are at different points in their academic/professional education may have influenced the regression model outcomes.

For future research, completing a separate regression analysis on the two-student year level cohort groups is suggested to see if differing models emerge is suggested. However, the smaller participant sample group sizes ($n = 70$ and $n = 44$) would be an acknowledged limitation of completing such analyses. It is recommended that longitudinal research incorporating larger and more heterogeneous samples be completed to generate data that explores possible changes in students' EI skills and personality style across the course of study, and how this relates to fieldwork performance. It should also be acknowledged that there may be affective predictors of practice performance other than EI and personality traits. Therefore, it is recommended that other studies be completed to investigate if any other relevant constructs or factors are predictive of occupational therapy students' fieldwork performance.

Conclusion

The present study adds to the growing body of evidence on the role of EI and personality traits in practice performance, and more specifically extending the findings to the fieldwork performance of occupational therapy students. The key findings demonstrated that measures of EI were positively related to occupational students' fieldwork performance, specifically in the areas of professional behaviour and communication skills. The results suggest that the measurement of EI may be a useful tool for some aspects of performance and a basis for improving curricula to promote self-awareness of non-cognitive attributes among occupational therapy students. This may assist in the education of graduates with the ability to handle conflict in emotionally intelligent ways, to communicate succinctly and responsibly, and to develop professional relationships with clients and colleagues. Understanding the factors that influence occupational therapy fieldwork performance might also facilitate the transition of students' from their fieldwork placements to becoming skilled and fulfilled occupational therapists in the workforce.

Conflict of interest

The authors declare no conflict of interest.

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