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Online support: The potential of the internet as a means of supporting carers of individuals with enduring mental illness

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When an individual is experiencing a mental illness, this can also have a significant impact on their carers, often comprising of family members or friends. Carers can provide both invaluable physical and emotional support (a role that can last up to 24 hours a day, 7 days week) to their relative who, without which, would otherwise struggle to cope. Carers are seen to be an essential component of holistic mental health care. There is a move to encourage carer collaboration with professionals in the UK, in terms of their relative's care, one key example of this being the Triangle of Care (see Worthington & Rooney, 2016). This strives for a partnership between carer, professional and service user for the provision of treatment and support, improving carer involvement within care planning.

Lee & Schepp (2013) reported that carers are often thrust into a caring role (and as such are coping with potentially distressing symptoms experienced by their loved one) with little prior knowledge of mental illness. It is therefore not surprising that this can affect carer's mental health. While providing a caring role can have beneficial effects, there is significant focus on the negative aspects, for instance the varying degrees of anxiety in carers of someone with a personality disorder (Bailey & Greyner, 2014), the negative impact on the well-being of carers of someone with psychosis (Omwumere et al., 2016), and a reduced quality of life in carers of someone with bipolar disorder (Srivastava, Bhatia, Sharma, Rajender, & Kumar, 2010). When considering the invaluable support carers provide to those they care for, it is essential that they are supported in their role and research into this area continues.

However, despite undertaking caring roles and responsibilities, many fail to recognise or identify with the term 'carer'. This is particularly evident in young carers; with many feeling that they were simply

contributing towards the household as opposed to 'caring' and some struggling to differentiate between this and general 'helping' (Smyth, Blaxland & Cass, 2010). This may result in a failure to seek support within their role, likely having a negative impact on carer health and well-being.
Although support for carers is available (for instance, psychoeducation and family interventions), a failure to identify as a carer – along with other barriers such as funding restraints – may create blockades to receiving this support. With the continued growing prominence of the internet and the constant popularity of social media, the internet could be an invaluable tool to reaching and supporting carers.

This can be advantageous, allowing carer access to support anywhere, if there is an internet connection, and at any time. Not only can this overcome the restriction of organisational opening hours, this can be economic and provide support without the need of leaving the care recipient or finding replacement care (Stjernswärd & Hansson, 2014). Available social media networks and online forums can allow connection with other carers, reducing isolation and stigma towards seeking support (invaluable if carers are unable to travel or live in remote areas).

Over a decade ago, Blackburn, Read & Hughes (2004) investigated factors influencing online usage in carers. Of those who used the internet, over half used this once or more during the week. Factors that affected internet usage were age, sex, number of hours caring, and employment. While this was not specifically linked to mental health, it would not be difficult to apply these to those caring for someone with an enduring mental illness.

Despite this, it is important to be mindful of the possible barriers such as lack of technological skills and confidence. For instance, Read & Blackburn (2005) found that the highest reported barriers were time restraints and difficulty in use (e.g., struggling to find information or navigating websites). Other potential barriers include the digital divide: the assumption that the younger generation are more likely to use the internet and technology (generally and also for support) compared to the older generation who may not have access. With the increasing access to technology and change in times (such as the emergence of smartphones and tablets), there is an expectation that this will reduce. However, currently this can still remain a prominent issue and it is therefore important for consideration for development of future online interventions.

There remains a debate about the effectiveness of online support, especially when compared to traditional face-to-face methods. However, it is important to remember the advantages that online support can provide. As such, this should not be viewed as a replacement to face-to-face support, but as a potential to expand and to encourage more carers to access support. Currently, there is a growing focus on providing online support for carers of someone with a serious mental illness (such as schizophrenia or psychosis). Current randomised controlled trials are exploring this area and I look forward to the future results and further focus within this area.

As the internet can be used increase access to support, this can also relate to online journals such as *Psychreg Journal of Psychology (PJP)*. I am proud to present the second issue of the PJP. Although I joined the editorial board before the publication of the first issue, I am encouraged to see how far this has advanced in such a short amount of time. I am happy to inform our readership that PJP is now indexed at JGate and ResearchBib. I am also pleased to inform readers of Psychreg's first international conference (ICPCE 2018) which will be held in Quezon City, Philippines on the 3rd – 5th August 2018. Rohit Sagoo, one of the PJP editorial board members, will be supporting this as one of the session speakers.

As with the first issue, we present a wide range of topics in psychology. Avril Truttero-Clark opens this issue by exploring the relationship between emotional intelligence and mood regulation (considering the influential factors of experiential avoidance and reflective coping) in individuals experiencing a

mood disorder. Using regression analysis, relationships were found between emotional intelligence and mood regulation, in particular between experiential avoidance and mood regulation. This suggests the possible positive clinical implications of interventions with a focus on experiential avoidance for those experiencing a mood disorder.

Following this, Ashley Coveney and Mark Olver used regression analysis to identify the defence mechanisms and coping strategies that predicted eating disorder traits. The results of this quantitative-based study indicate that maladaptive defence mechanisms (as opposed to coping strategies) predicted higher levels of eating disorder traits within those with elevated anorexia nervosa and bulimia nervosa traits.

With regards to emotional intelligence, Gobinder Singh Gill and Shraddha Sankulkar explore emotional intelligence from an educational perspective. Comparing levels in teacher-practitioners from the UK and India, they found high levels of emotional intelligence in female teacher practitioners, as well as male and female Indian practitioners. In particular, they highlighted the importance of self-awareness within the relationship of emotional intelligence and other subdomains.

Examining the effectiveness of human behaviour map (HBM) intervention with people with depression, Joana Oliveira and colleagues found a reduction in depression. For the majority of the sample, a significant reduction of depression was shown within five and ten sessions. Additionally, the majority of the sample completely recovered from depression, suggesting the effectiveness of this intervention in the treatment of depression (especially those with severe depression).

Building on previous work, Soumen Acharya found that interpersonal factors (peer acceptance, peer rejection, number of reciprocated friends and enemies) moderated longitudinal relationships between personal factors (aggression/depression, withdrawal, aggression, and lack of physical strength) and victimisation. Additionally, victimisation was shown to predict an increase in anxiety/depression and withdrawal; however this occurred with increased peer rejection and number of reciprocated enemies, along with reduced peer acceptance. Finally, participant level of anxiety/depression predicted an increase in victimisation, occurring alongside negative interpersonal factors.

The founder of Psychreg and Editor-in-Chief of PJP, Dennis Relojo delivers the history of psychology-based blogs. Covering the numerous advantages to this medium (with a focus on the ability to promote the subject), he provides an overview of available popular blogs relating to psychology and related fields. He further discusses how blogs can serve as a transformative medium to promote the discipline of psychology and allied fields.

Davut Acka explores the historical development of measurements of personality for the recruitment of police officers. Identifying three major criticisms of this field (lack of theoretical frameworks, lack of agreed definition of personality traits and police tasks, and poor measurement tools available), he explores these and discusses potential solutions in adherence to personality theories, with the inclusion of policy recommendations and suggestions for future research.

Max Edward Guttman explores the use of intramuscular injections for antipsychotic medications. With the aim of instigating a conversation about this topic, they urge that clinicians move away from stigma and hope that this discussion will contribute towards mental healthcare consumer knowledge, raise awareness, and promote the importance of choice within treatment.

We conclude with two interviews written by Editor-in-chief Dennis Relojo, the first of which is with Dr Bruce Cohen, the editor of the *Routledge International Handbook of Critical Mental Health*. This interview centres on the latest volume which evaluates the practises, priorities and knowledge base of

the Western mental health system. Finally, this issue concludes with an interview with Dr Stella Compton Dickinson, author of *The Clinician's Guide to Forensic Music Therapy.*

We hope you enjoy this issue and would like to thank you for your continued support.

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Exploring emotional intelligence, mood regulation, and reflective coping in a clinical population

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Emotional intelligence (EI) is the ability to carry out accurate reasoning about emotions and to use emotions and emotional knowledge to enhance thought (Mayer & Salovey, 1995). This study extends similar investigations into the relationship between EI and Mood Regulation (MR), in particular those affected with mood problems. Furthermore, influence of Experiential Avoidance (EA) and Reflective Coping (RC) was also considered. Ninety-five participants who were currently experiencing some form of mood disorder were recruited through mental health support forums. They completed questionnaires measuring EI, MR, EA, and RC in an online survey. Correlational and multiple regression analyses indicated that overall associations were found between EI and mood MR. However, unlike previous works, an association was found between the personality variable EA and MR. This suggests that clinical interventions aimed at reducing EA may be of a particular benefit to people currently experiencing mood problems.

Keywords: emotional intelligence, experiential avoidance, mood regulation, reflective coping

BACKGROUND

The present work sets out to investigate two major classes of hypotheses. First, it investigated to what extent the relationship was between EI and MR was, in particular concerning those who have mood problems. Secondly it considered that EA and RC may be a predictor of MR.

Emotional intelligence and mental health

Ciarrochi, Deane, and Anderson (2002) explored whether EI is distinctive in understanding the relationship between stress and mental health. They thought that those individuals who are skilful at regulating their own and others' emotion will be able to cope themselves for the effects of stress, and in turn will report less depression, hopelessness, and thoughts of suicide. Ciarrochi et al. (2002) also looked at whether those who scored highly in the 'emotion perception' aspect of EI would be more influenced by stress than those who had a low perception. Schutte et al. (1998) self-report measure of EI was used to assess 'emotion perception' and 'emotion management and Multifactor Emotional Intelligence Scale (MEIS) by Mayer, Salovey, Caruso (1997), which was used as it has been shown to be reliable and relatively independent of verbal IQ. There has previously been some evidence to show that some forms of emotional intelligence can help an individual better manage their emotions For instance, it has been investigated whether EI moderates the relationship between an experimentally-induced mood and model-based judgemental biases and mood management (Ciarrochi, Chan, & Caputi, 2000). It has been found that individuals with a high EI reported being in a more positive mood, suggesting that highly emotionally people are better at managing their emotions than those who are of a lower EI.

Emotional intelligence and mood disorders

EI has been linked to mood disorders such as borderline personality disorder (Gardner & Qualter, 2009). Levine, Marziali, and Hood (1997) reported that individuals with borderline personality disorder (BPD) have deficits in self-reporting emotional awareness and integration. Studies have also investigated at trait abilities in relation to BPD but as of yet, there are not many reports on the ability of EI with BPD. However, EI ability models associated with self-reported anxiety (Bastian, Burns, & Nettelbeck, 2005) and schizotypal personality (Aguirre, Sergi, & Levy, 2008) suggesting a link between mental health.

Gardner and Qualter (2009) conducted a study that looked into the emotion management aspect of EI in individuals with BPD. It is observed that BPD is characterised by impulsive behaviour, unstable self-image and interpersonal relationships, and extreme difficulties in emotion and management (Links, Heslegrave, & Reekum, 1999). The study revealed that for ability EI showed that individuals with BPD have poor ability to understand their emotions suggesting that they are of low EI.

Measuring emotional intelligence

Multiple approaches to measuring EI have been developed based on two differing conceptions as to its meaning. Firstly, EI has been defined as a specific ability. This approach focuses on a particular set of skills that are deemed fundamental to EI (Salovey & Mayer, 1990). A second, mixed model approach more broadly defines EI as 'emotionally and socially intelligent behaviour' (Bar-On, 2004). When assessing a person's EI using this approach, one or more attributes of EI are measured and then other scales (i.e., happiness, stress tolerance, and self-regard) are included in the overall assessment (Bar-On, 1997). This work focuses on the first of these two approaches: specific ability.

Measuring EI as a specific ability requires further understanding of the complexities of this definition. Mayer, Salovey, and Caruso's (1997) definition of EI considers a person's ability to reason about, perceive and understand emotions to assist thought and ultimately to reflect on and regulate emotions in order to 'promote emotional and intellectual growth'. They developed a model called 'The Four-

Branch Model of Emotional Intelligence' which focuses on four abilities: (i) accurately perceiving emotion; (ii) using emotions to facilitate thought; (iii) understanding emotion; and, (iv) managing emotion.

Exploration of the specific ability definition through a four-branch model was used by Schutte et al. (1998) as the basis of a 62-item self-report measure of EI. Factor analysis on these 62 items resulted in a one-factor solution of 33 items and covered the following categories: appraisal and expression of emotion in the self and others; regulation of emotion in the self and others; and, utilisation of emotions in problems solving.

Salovey and Mayer (1995) developed Trait Meta Mood Scale (TMMS) by asking 200 individuals to respond to items by Mayer, Mamberg & Volanth (1988). Items fitted into five sections: clarity of emotional perception; strategies of emotional regulation; integration of feelings; attend to emotions; and, attitudes about emotion. Half of the items were phrased positively and half negatively. Items that referred to strategies of emotional regulation looked at to what degree do individuals moderate their moods.

Experiential avoidance and reflective coping

The Acceptance and Action Questionnaire (AAQ) developed by Hayes et al. (2004) is the most widely used measure of experiential avoidance, which refers to an attempt or desire to suppress unwanted private experiences. These can include emotions, thoughts and bodily sensations. Experiential avoidance is thought to be an important cause of psychological distress in effectiveness (Hayes, Wilson, Gifford, Follette, & Strosahl, 1996). Therefore, greater levels of the AAQ-II scores should be related to greater emotional distress such as worse general mental health, as well as higher levels of depression, anxiety, and stress (Bond & Donaldso-Feilder, 2004). A meta-analysis that used the AAQ found outcomes for depression, anxiety, general mental health, job satisfaction, future work absence and future job performance, and has even shown these effects after controlling for emotional intelligence.

In respect to RC, emotional support-seeking and RC are scales of Proactive Coping Inventory (PCI) by Greenglass, Schwarzer, Jakubiec, Fiksenbaum, and Taubert (1999). Throughout this study, emotional support-seeking and RC will be referred to as RC. The PCI revealed that it was negatively associated with depression, and data thus suggested that depression is less likely an outcome if an individual takes initiative when confronting a problem and turns obstacles into positive experience rather than trying to suppress it.

This study aims to extend existing research into the relationship between EI and mood regulation targeting a clinical population suffering from mood problems. This is because within this population a stronger relationship between these two personality variables are expected. Furthermore, this work will also consider the influence of EA and RC, alongside EI on mood regulation.

More specifically, the following correlational hypotheses are sought:

1. EA and effective mood regulation are negatively correlated whereas EI and RC will be positively correlated with MR.
2. All four personality variables will be correlated with self-rated therapy success. EI, effective MR and RC will be positively correlated with therapy success whereas EA will be correlated negatively.

A further aim of this work is to build an optimal prediction model for MR and therapy success using the previous personality variables as predictors.

METHODOLOGY

Participants

Ninety-five participants, 22 males (23.2%) and 73 females (76.8%) have taken part. The target population of this study were adults who had a mood disorder. Participants were recruited from online advertisements posted on mental health charity, support forums, and Facebook groups and were thus regarded as a self-selected opportunity sample.

Design

A web-based survey was employed to examine the relationships between the personality variables, which were investigated using self-report questionnaires to be completed online. A web-based survey design was deemed to be an appropriate method of data collection as it enabled a specific population to be targeted.

Measures

Participants completed a brief questionnaire (developed for this study) about relevant background information, including their sex, age, current employment status, what mood disorder they had and for how long they had been suffering from their mood disorder, and treatment they received and if it was successful or not. Following this, four standardised questionnaires were administered.

The Schutte Self-Report Emotional Intelligence Test (SSEIT; Schutte et al., 1998) was used to measure general emotional intelligence using four subscales: appraisal and expression of the self and others (e.g., 'Emotions are one of the things that make my life worth living.'); regulation of emotion (e.g., 'I seek out activities that make me happy.'); and, utilisation of emotion (e.g., 'I motivate myself by imagining a good outcome of tasks I take on.'). Individuals responded using a five-point scale. The scores are summed to produces scale scores ranging from 33 – 165 that quantify an individual's EI. The higher the score is, the higher the individual's EI. Schutte et al. report an adequate internal consistency reliability (r = 0.87 to .90) and acceptable test-retest reliability

The Trait Meta Mood Scale (TMMS; Salovey et al., 1995) was utilised as a measure of mood. This scale contains 30 items that will find individual differences in the way people attend to their moods and emotions, being able to discriminate clearly among them, and regulate them. Scores are summed to produce scale scores ranging from 30–150, participants with a high score may want to, but fail to attend to their moods and emotions and thus be unable to discriminate between them and regulate them. The internal consistency estimates for subscales were all above .85, and the test-retest correlations.60 to .83 (Fernández-Berrocal, Extremera, & Ramos, 2004).

The ten-item Acceptance and Action Questionnaire-II by Bond et al. (2011) was used as a measure of experiential avoidance. Respondents were asked to rate the degree to which each statement applies to them using a seven-point Likert scale. Three items were reversed scored and then ten items were summed to give a total score ranging from 10–70. Higher scores indicate greater levels of EA. The AAQ-II has demonstrated good internal consistency (alpha coefficient mean of 0.84). It also has good test-retest reliability of 0.81 and 0.79 for twelve and three months, respectively (Lewis & Naugle, 2017).

Proactive Coping Inventory (PCI; Greenglass et al., 1999) was used to gauge RC. PCI is an inventory to assess skills in coping with distress, as well as those that promote greater well-being and greater satisfaction with life. RCS, which is a subscale of PCI, is an 11-item scale which describes simulation and contemplation about a variety of possible behavioural alternatives by comparing their imagined effectiveness and includes brainstorming, analysing problems and resources, and generating

hypothetical plans of action (Greenglass et al., 1999). Items are then summed to give a total score ranging from 16–112. RCS has good internal consistency with Cronbach's alpha of .79.

Procedure

Ten online mental health forums and Facebook groups were contacted via personal message or email asking for permission to advertise the study on their forums or Facebook page. When permission was granted, a brief advert was placed on the forum or Facebook page containing a link to the study website, Bristol Online Survey. Once potential participants had accessed the link, they were presented with information about the study and asked to confirm their informed consents to participate. The questionnaires were then presented in order of demographic questions, self-reported EI, TMMS, EA, and RC.

RESULTS

Descriptive statistics for the four personality variables can be seen in Table 1 and box plots can be found in Figure 1. As can be seen, the distribution of scores for EI is slightly positively skewed, with the other personality variables nearly symmetrical.

To investigate whether there might be group differences on the four scales as a result of a participant's gender, a series of independent samples t-tests were computed with gender as the independent variable and each of the four scales as the dependent variables. The results showed that there were no significant differences between males and females and their scores for each of the four personality variables, EI $t(93) = -0.157$, $p = 0.876$; MR $t(93) = -0.432$, $p = 0.667$; EA $t(93) = -0.747$, $p = 0.457$; and, RC $t(93) = 0.305$, $p = 0.761$

Table 1
Descriptive statistics for the four personality traits

Scale	*N*	Min.	Max.	*M*	*SD*	Skewness	Kurtosis
Emotional intelligence	95	55	144	110.94	19.099	0.388	0.241
Mood Regulation	95	67	131	98.60	15.576	0.083	–0.697
Experiential Avoidance	95	14	68	45.91	12.324	–0.356	–0.248
Reflective Coping	95	21	104	62.05	18.142	–0.009	–0.062

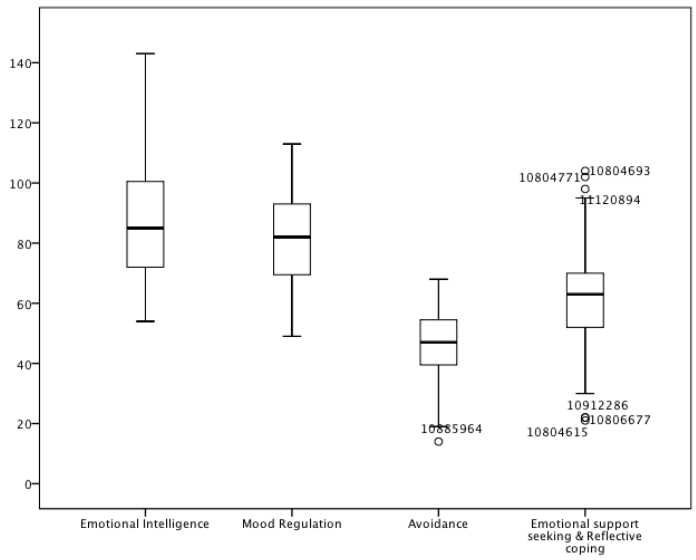

Figure 1. Box plots for the total scores for Emotional Intelligence, Mood Regulation, Experiential Avoidance, and Reflective Coping

Relationships among the four personality variables were investigated using Pearson's correlation coefficient. As clearly demonstrated by Table 6 and Figures 2–4, the results suggested linear relationships.

Table 2
Correlation matrix for the four personality variables

Scale	Reflective Coping	Mood Regulation	Emotional Intelligence
Experiential Avoidance	–.542**	–.660**	–.621**
Reflective Coping	--	.520**	.554**
Mood Regulation	--	--	.718**

** p<.001

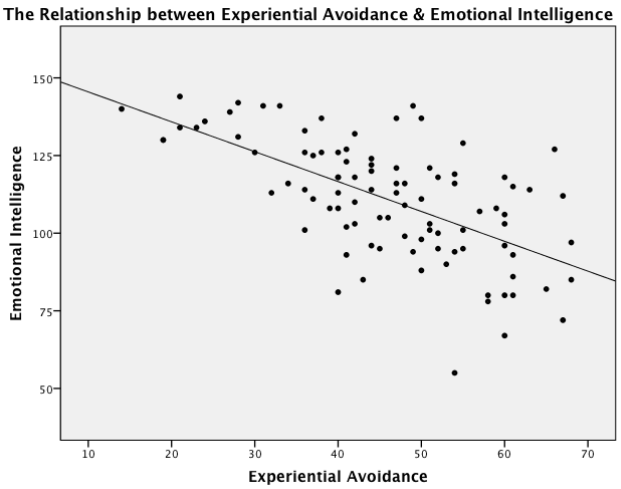

Figure 2. Scatter plot showing the relationship between EA and EI

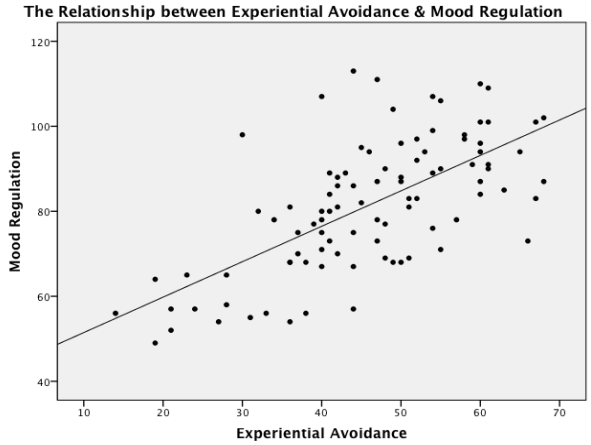

Figure 3. Scatter plot showing the relationship between EA and MR

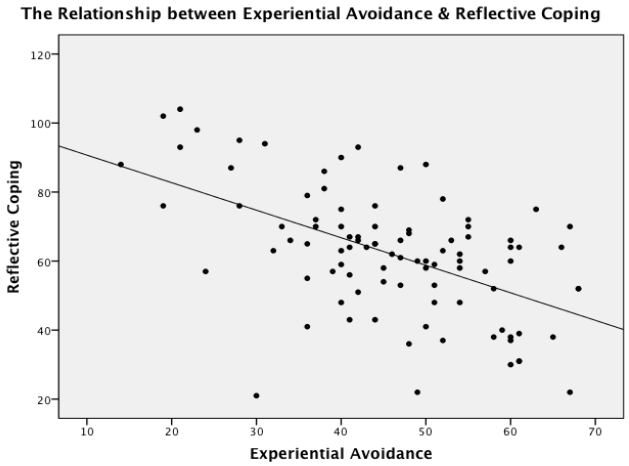

Figure 4. Scatter plot showing the relationship between EA and RC

To examine mean differences between the length of a participant's illness and level of education, in relation to the four personality variables, eight one-way ANOVA tests were carried out with length of illness and education as independent variables.

Table 3
Group means and standard deviations for the four personality variables and education

Education		RC	EA	MR	EI
Secondary	*M*	55.93	49.52	97.44	106
	N	27	27	27	27
	SD	14.77	11.33	13.18	19.14
Pre-university	*M*	59.57	47.13	96.80	108.97
	N	30	30	30	30
	SD	16.59	13.47	16.11	18.24
University	*M*	66.58	43.76	101.09	117.75
	N	24	24	24	24
	SD	20.26	11.62	15.63	14.09
Postgraduate	*M*	71.43	40	100.43	113
	N	14	14	14	14
	SD	19.53	11.03	19.26	25.73
Total	*M*	62.05	45.91	98.60	110.94
	N	95	95	95	95
	SD	18.14	12.32	15.58	19.10

Results indicated that only one of the ANOVAs was significant: education and RC, $F(3, 93) = 3.164$, $p < .05$ with an effect size of 0.934 indicating that 9% of the variability in level of education can be explained by RC. Furthermore, there was a significant outcome between education and EA, $F(3, 93) = 2.279$, $p < .05$, with 9.3% variability. Bonferroni correction revealed a significant difference between RC and participants whose highest level of education was either secondary, ($M = 55.93$, $SD = 14.77$) or a postgraduate degree, ($M = 71.43$, $SD = 19.53$) with a mean difference of 15.5.

Table 4
Group means and standard deviations for the four personality variables by length of illness

Length of Illness		RC	EA	MR	EI
1–3 Years	*M*	61.75	46	94	106.13
	N	8	8	8	8
	SD	16.66	5.78	13.87	17.59
More than 3 Years	*M*	62.08	45.90	99.02	111.38
	N	87	87	87	87
	SD	18.36	12.78	15.73	19.27
Total	*M*	62.05	45.91	98.60	110.94
	N	95	95	95	95
	SD	18.14	12.32	15.58	19.10

There were no significant differences between length of illness and any of the four personality variables which were: RC, $F(1, 93) = .002$, $p > .05$; EA, $F(1, 93) = .002$, $p > .05$; MR, $F(1, 93) = .760$, $p > .05$; and, EI, $F(1, 93) = .552$, $p > .05$. There were also no significant differences between educational attainment and MR, $F(3, 93) = 2.279$, $p > .05$; and educational attainment and EI, $F(3, 93) = 1.827$, $p > .05$.

DISCUSSION

This study attempted to find out to what extent MR dependent on EI, RC, and EA in a population suffering from mood problems. EA is capturing the ability to suppress unwanted private experiences, and RC refers to how he proactive individual takes responsibility for making things happen, for example, using his initiative when confronting a problem and turning an obstacle into a positive experience.

The main aim of this research was to extend similar studies into the relationship between EI and MR, in particular concerning mood problems. Mayer and Salovey (1995) reported that individuals with high EI reported experiencing a more positive mood, thus suggesting that people who suffer negative mood states find it difficult to regulate their mood may have lower EI. In addition, it was considered that EA and RC may be a predictor of MR.

Overall, associations were found between EI and MR. However, unlike previous works, an association was found between the prediction variable EA and MR.

Correlational and multiple regression analyses

A series of correlational analyses were conducted to see if there were any relationships between the four personality variables, and to identify if any of the personality variables were predictors of EI and MR. It was hypothesised that EI would have a positive relationship with the personality variable MR. As suggested by Mayer & Salovey (1995), EI should be positively associated with adaptive emotion management, and thus essentially an emotionally intelligent individual would be able to successfully monitor, evaluate, and change their moods. In line with this view, results of the correlational analyses showed that EI was significantly positively associated with MR. Bond and colleagues (2011) suggested that greater levels on the AAQ will show greater levels of emotional distress and in agreement with this data, provided a novel finding. Results showed that EA was significantly associated with MR. Consequently, individuals who experienced high levels of avoidance showed greater levels of emotional distress such as anxiety and generally a worse mental health. This demonstrates that these individuals were less likely to effectively regulate their mood. Furthermore, RC showed a significant positive association with EI suggesting that individuals who are deemed to have a higher EI can efficiently cope psychologically with a negative or stressful life event.

To investigate the predictive power of the three personality variables, with respect to MR, a multiple regression analyses was performed. RC did not make a unique contribution to the model and was therefore removed. In the final model, which explained a large amount of 58% of the variance of mood regulation, EI turned out to be a strong positive predictor whereas EA was a moderate negative predictor. Previous research have shown that a relationship between EI and MR exists, but as of yet no research has considered also the contribution of EA as a predictor of MR. With this in mind, it seems promising to think about training programmes or psychological interventions that enhance EI in the mood disorder population. Similarly, therapeutic measures should be considered that effectively reduce the amount of EA.

The relationship between success rate of treatment and each of the four personality variables

It was validated by a substantial correlation that each of the personality variables had a significant relationship between the success rates of treatment. EI and RC showed a positive correlation between the success rates of treatment, which indicates that, those individuals who scored highly on the EI and RC scale also rated their treatment to be more successful. In regards to EI this supports both (Schutte, et al., 1998; Salovey & Mayer, 1990) views of EI. Both studies found that high scores on their scale point towards a high EI and individuals would thus be able to reason, perceive, and understand their

emotions and ultimately reflect on and regulate emotions in order to 'promote emotional growth'. Only individuals who had rated their treatment as successful would be able to do this, suggesting that those who have a low EI would have rated their treatment unsuccessful.

As one would expect MR showed a substantial correlation and suggests that an individual who experiences their feelings clearly are inclined to be less depressed that those who experience conflicting feelings towards a person or thing. Moreover, those who experienced higher levels of EA rated their treatment to be less successful that those who experienced lower levels of EA. This can be supported by the results from the correlation matrix, which showed that there was a highly significant negative correlation between EA and MR. Previous research has not investigated this relationship and these results advise individuals who are frequently trying to avoid particular private experiences are failing to comprehend their feelings clearly, and as a result, are poor at monitoring, evaluating, and regulating them.

The relationship between age and four personality variables

With respect to age, results found that there was no correlation between RC and EI. MR had a significant positive relationship with age. This indicated that as participants age, the better they were at regulating their emotions. This may be because older participants may have received more successful therapy than their younger counterparts. Furthermore, older participants had a significant negative correlation with EA. Again, this may suggest that they had received more successful therapy in their lifetime that younger participants.

Discussion on additional findings

In addition to the correlation and multiple regression analyses, additional analyses were carried out. These examined gender differences on the personality variables, and group differences based on length of illness and education level with the four personality variables.

Gender differences on the personality variables

Interestingly, there were no significant gender differences on any of the personality variables. This was surprising as the sample was heavily biased toward females, with quite small difference. The lack of gender differences could be due to a number of reasons, not least the heavy gender bias. If individual problem types have been investigated instead, it is possible that differences between male and female participants would have been illuminated.

Group differences on length of illness and education level with the four personality variables

With regards to any group differences on the length of an individual's illness and their education level with any of the four personality variables, one-way ANOVA revealed that the only significant difference was between education and RC. However, there was a borderline significant difference between education and EA. Post hoc analyses revealed that these differences were between individuals whose highest level of education was either secondary or a completion of master's degree. This is an interesting finding as it suggests that individuals who left school between the ages of 16–18 experience higher levels of avoidance and also those individuals around the age of 25, which in turn may suggests that those individuals are unwilling to remain in contact with particular private experience and do what they can to alter the frequency of these experiences.

CONCLUSION

The present study argued that it is sensible to apply the concept of emotional intelligence, mood regulation, experiential avoidance, and reflective coping in a clinical population. In spite of the popular approach to emotion, where it is often discussed in terms of adaptation, more cognitively inclined emotion and emotional regulation may be assessed in a clinical population. A fair amount of psychological research was taken into account. However, unlike earlier works, an association was observed between the personality variables of EA and MR. For instance, studies conducted with nurses or nursing students have shown that EI is a skill that minimises the negative stress consequences. The work examined the role of perceived emotional intelligence (PEI) measured by the Trait Meta-Mood Scale, in the use of stress-coping strategies, in the quantity and quality of social support and in the mental health of nursing students. The results indicated positive correlations between clarity and social support, social support and repair, and social support and mental health. Hierarchy regression analysis pointed out that clarity and emotional repair are predictors of social support, and emotional repair is the main predictor of mental health (Montes-Berges & Augusto, 2007). These results show the importance of PEI in stress coping within the nursing framework. It therefore suggests that clinical interventions aimed at reducing EA may be of a particular benefit to people who are currently experiencing mood problems. For instance, an earlier study (Relojo, Pilao, & dela Rosa, 2015) observed that although no significant relationship has been observed, it is argued that findings from this study will highlight the need for teacher-training programmes to raise awareness of the emotional demands of teaching and consider ways to enhance emotion regulation skills inexperienced as well as recently qualified teaching staff. Indeed this is an emerging notion that needs to be considered in future research.

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Defence mechanism and coping strategy use associated with self-reported eating pathology in a non-clinical sample

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We examined the association of eating disorder traits (i.e., anorexia nervosa [AN] and bulimia nervosa [BN] traits) with the self-reported use of defence mechanisms and coping strategies. We also identified the specific mechanisms that best predicted eating disorder traits. The Eating Attitudes Test-40, Defense Style Questionnaire-40, and COPE scales were administered to a non-clinical sample of 429 students and staff. In general, individuals with elevated AN and BN traits reported using more immature/maladaptive defences and coping strategies. Linear regression models revealed that this association was more pronounced for defence mechanisms than coping strategies. High self-reported use of certain maladaptive defence mechanisms, particularly somatisation and displacement, most consistently predicted higher levels of self-reported AN and BN traits; coping strategies, however, were less frequently predictive of self-reported eating pathology. Some differences were also observed between males and females, particularly concerning levels of eating disorder traits. The results indicate that individuals reporting high levels of eating disorders are likely to display features of personality dysfunction; most prominently, high frequency use of maladaptive defences.

Keywords: anorexia nervosa, bulimia nervosa, coping strategies, defence mechanisms, eating disorders

BACKGROUND

Eating disorders are recognised as persistent disruption of regular eating behaviours, often intended to regulate or control weight that contributes to the debilitation of physical health or psychosocial functioning (Fairburn & Walsh, 2002). Eating disorders can exact a devastating physical toll with an estimated 5.10 deaths annually from anorexia nervosa (AN) and 1.70 deaths from bulimia nervosa (BN) per 1,000 people (Arcelus, Mitchell, Wales, & Nielsen, 2011). The Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition (DSM-5; American Psychiatric Association [APA], 2013) defines the symptom profile of AN as an unwillingness to maintain body weight within a normal range, bearing an extreme fear of gaining weight, and giving body weight or shape unnecessary priority in self-evaluation. In turn, the DSM-5 symptom profile of BN includes both recurrent episodes of binge eating and recurrent behaviours to prevent weight gain (e.g., self-induced vomiting, misuse of laxative or other medications, or excessive exercise) after binge eating episode (APA, 2013).

The psychological processes of eating pathology have important implications for aetiology, assessment, and intervention. Accordingly, the personality characteristics of individuals with eating disorders have received empirical attention with poor interoceptive awareness, perfectionism, and obsessiveness found to be particularly salient examples (Leon, Fulkerson, Perry, & Early-Zald, 1995; Santonastaso, Friederici, & Favaro, 1999). Comparatively, little research exists however, on other psychological processes that can have clinical ramifications such as defence mechanisms and coping strategies employed by those with elevated levels of eating disorder traits. Additionally, this study examined which class of mechanism (i.e., defence or coping), and the specific psychological processes associated with each, had particular prominence in the prediction of eating pathology. This, to our knowledge, has been noticeably lacking in previous research, and is a gap in the literature the present study sought to address.

Defence mechanisms and coping strategies: A brief overview

Defence mechanisms refer to involuntary psychological processes that function to alter how stressful events are perceived, such that drastic changes in one's internal and external environment are significantly reduces (Vaillant, 1994). Defence mechanisms buffer the effects of excessive anxiety, enabling individuals to still somewhat function in these situations while preserving self-esteem (Cramer, 1987; Cramer, 2006). Similarly, coping mechanisms are behaviours intended to reduce or diminish psychological distress or stressful conditions (Fleishman, 1984). As Cramer (1998) notes, the key distinction between the two is that defence mechanisms ostensibly involve unconscious processes, while coping mechanisms employ purposeful, conscious processes. Thus, coping occurs with intentionality while defences presumably do not (McCrae, 1989).

Individual defence mechanisms can be grouped into a hierarchy of defence styles whereby some defences are considered more primitive and linked to personality while others are seen as more complex, healthy, and effective (Cramer, 1987). A common taxonomy is that of immature (i.e., maladaptive), neurotic (i.e., intermediate), and mature (i.e., adaptive) defence styles (Andrews, Singh, & Bond, 1993). Although coping mechanisms are not as readily hierarchically arranged, some effort has been made to group individual mechanisms into aggregates. For instance, 'avoidance coping' (C.J. Holahan, Moos, C.K. Holahan, Brennan, & Schutte, 2005) has several maladaptive correlates such as problem drinking and heightened negative psychological adjustment and physical health in men with prostate cancer (R. Moos, Brennan, Fondacaro, & B. Moos, 1990; Roesch et al., 2005).

Defence mechanisms, coping strategies, and eating pathology

Bouchard and Thériault (2003) proposed two models in an effort to explain the interrelationship of defences and coping mechanisms as their distinctions. Working from the field of marital adjustments, they termed their initial model the *independence hypothesis,* which emphasises the relative importance of defences and coping mechanisms without consideration of their level of adaptiveness. The independence hypothesis is based on the premise that coping mechanisms are more adaptive than defence mechanisms. Applied to eating pathology, this would suggest that defence mechanisms are positively related to AN and BN traits, and coping mechanisms, negatively related. Previous research elsewhere (e.g., Fulde, Junge, & Ahrens, 1995) has found defence mechanisms to better predict AN and BN traits than coping strategies.

Bouchard and Thériault's (2003) second model, termed the *effectiveness hypothesis,* takes adaptiveness into account arranging defences and coping mechanisms into four distinct groups: (i) maladaptive defence; (ii) maladaptive coping; (iii) adaptive defence; and, (iv) adaptive coping. In this model maladaptive defence mechanisms and adaptive coping mechanisms are equally unhealthy while adaptive defences and adaptive coping mechanisms are equally salutary. Applied to eating pathology, the effectiveness hypothesis would suggest that maladaptive defence and coping mechanisms should be associated with increased AN and BN traits, while adaptive defence and coping mechanisms should be negatively associated. Prior research elsewhere (e.g., Mayhew & Edelman, 1989; Steiger & Houle, 1991) has demonstrated that maladaptive strategies, in general, to be a better predictor of increased AN and BN traits than adaptive strategies.

In all, the limited research has indicated that individuals with an eating disorder diagnosis or at least prominent traits are more likely to employ maladaptive and immature defence mechanisms (e.g., denial, projection, and passive aggression) than individuals without eating pathology (Gothelf et al., 1995; Poikolainen, Kanerva, Marttunen, & Lönnqvist; Steiger, Goldstein, Mongrain, & van der Feen, 1990; Stein, Bronstein, & Weizman, 2003). Individuals high in eating disorder traits have not necessarily been diagnosed with an eating disorder, but display similar key attributes as diagnosed individuals. The extant literatures has also demonstrated that individuals with AN and BN diagnoses or traits more frequently employ maladaptive avoidance coping mechanisms (e.g., Koff & Sangani, 1997; Mayhew & Edelman, 1989; Troop, Holbrey, & Treasure, 1998; Troop, Holbrey, Trowler, & Treasure, 1994). To our knowledge, however, only one study has examined defence mechanisms, coping mechanisms, and eating disorders concurrently. Several years ago, Smith, Feldman, Nasserbakht, and Steiner (1990) examined the defence and coping mechanisms employed by individuals with AN near their diagnosis and six years post-diagnosis. As anticipated, they found that those with AN, who continued to have psychiatric problems at the six-year follow-up, used more immature defence mechanisms and avoidance coping mechanisms than those without eating disorders. BN diagnoses were not examined however, nor did the researchers attempt to establish which types of mechanism better predicted eating pathology.

Present study and hypotheses

Given the limited work examining coping and defence correlates of eating pathology, the current study examined the extent to which individuals with eating disorder traits reported using maladaptive defence and coping mechanisms with greater frequency than individuals who scored lower on eating disorder traits. Moreover, the study also identified which mechanisms (i.e., defence or coping) best predicted eating disordered traits. Accordingly, we proposed the following hypotheses:

1. High AN and BN traits will be positively associated with self-reported usage of maladaptive immature defence mechanisms.

2. High AN and BN traits will be positively associated with self-reported usage of individual coping mechanisms related to maladaptive avoidance coping, specifically behavioural disengagement, mental disengagement, and substance abuse.
3. Based on the independence hypothesis, it is anticipated that self-reported usage of selected defence mechanisms (i.e., those that demonstrated significant bivariate associations in previous analyses) will predict increased AN and BN symptoms. Conversely, self-reported usage of selected coping strategies will predict decreased AN and BN symptoms.
4. Based on the effectiveness hypothesis, it is anticipated that self-reported usage of selected maladaptive defence mechanisms and coping strategies will uniquely predict increased AN and BN traits. In turn, self-reported usage of selected adaptive defence mechanisms and coping strategies will uniquely predict decreased AN and BN traits.
5. Given the elevated base rate of eating pathology among females in epidemiological findings, it is anticipated that females will have higher levels of self-reported eating pathology than males and associated defences and coping strategies

METHOD

Participants

Participants included 429 university students and staff members (356 females, 71 males) from a Midwestern Canadian medical doctoral university. Participants' ages ranged from 17 to 57 (M = 23, SD = 6.50 years). They primarily self-identified as White (75%, n = 319), followed by Asian (11%, n = 49), Aboriginal (4%, n = 17), Black (3%, n = 13), or other (5%, n = 22). Respondents' body mass index (BMI) ranged from 15.60 to 53.20 (M = 24.62, SD = 5.79). Participants were recruited through the university's psychology research participant pool for course credit or the university's online bulletin.

Measures

Eating Attitudes Test-40 (EAT-40) and Eating Attitudes Test-26 (EAT-26). Permission was obtained to use the EAT-40 and EAT-26 scales in the present study. The EAT-40 (Garner & Garfinkel, 1979) and its shorter version, the EAT-26 (Garner, Olmsted, Bohr, & Garfinkel, 1982), are self-report inventories designed to measure participants' symptomatologies, behaviours, and attitudes associated with eating disorders. An overall eating pathology score, as well as three subscales scores (Dieting, Oral Control, Bulimia and Food Preoccupation) can be obtained. The subscales are based exclusively on 26-items used in the EAT-26 (α = .91, 95% CI [.90, .92]). We administered the EAT-40 but only analysed the item content for the EAT-26 in order to examine the subscales. The subscales are listed as follows with internal consistency (Cronbach alpha) values from the present data reported for each. The 13-item Dieting subscale and 7-item Oral Control subscale assess traits commonly associated with AN, for example, 'I am terrified about being overweight.' (Dieting subscale; α = .85, 95% CI = .83, .87) and 'I feel that others would prefer if I ate more.' (Oral Control subscale; α = .77, 95% CI = .73, .80), while the Bulimia and Food Preoccupation subscale assesses traits commonly associated with BN (e.g., 'I vomit after I have eaten.' α = 81.95% CI = .78, .83).

Items are rated on a 6-point scale Likert-type scale (1 = *always* to 6 = *never*). These responses, however, are scored using a 0–3 format, with problematic responses receiving a score of 1.2, or 3 based on severity, while the other non-problematic options (i.e., the other three response options) are scored 0. Item responses are summed with higher scores representing greater eating pathology (an overall score at or above 30 indicates high eating pathology), although item means are presented in the current study. Psychometric research (Garner et al., 1982; Garner & Garfinkel, 1979) has demonstrated support for the internal consistency of the EAT-40 overall score (α = .79), Dieting subscale (α = .90), Oral Control subscale (α = .83), and Bulimia and Food Preoccupation subscale (α = .84).

Defense Style Questionnaire-40 (DSQ-40). The DSQ-40 (Andrews, Singh, & Bond, 1993) is a 40-item self-report inventory designed to measure participants' defence styles and defence mechanisms through assessing the conscious derivatives of defence mechanisms (Bond, Gardner, Christian, & Sigal, 1983). An individual defence score for 20 defence mechanisms (two items for each individual defence), as well as three higher-order factor scores (mature, neurotic, immature) can be obtained. Sample items, such as 'Sticking to the task at hand keeps me from feeling depressed or anxious' (sublimation, mature) and, 'People say I tend to ignore unpleasant facts as if they didn't exist (denial, immature) are rated on a 9-point Likert scale (1 = *strongly disagree* to 9 = *strongly agree*). The score range from 2 to 18 for individual defences and vary based on the defence style (e.g., range from 24 to 216 for immature defences), with higher scores indicating greater usage of the defence mechanism. Final scores for each individual defence mechanism and defence style are calculated by computing the means of the relevant responses. In the present sample, adequate internal consistency reliability (Cronbach's alpha [95%]), based on Cicchetti et al. (2006) criteria, was obtained for the mature (α = .65 [.59, .69]); neurotic (α = .59 [.53, .65]); and, immature (α = .80 [.77, .83]) defence styles, consistent with past finding (Andrews et al., 1993; Ruutu et al., 2006). The defence mechanism scales, as opposed to the broader defence styles, were the primary foci of analysis in the present study.

COPE. The COPE (Carver, Scheier, & Weintraub, 1989) is a 60-item self-report inventory used to measure participants' individual coping mechanisms. Specifically, it measures a broad range of strategies that individuals may engage in when experiencing stress. The current study employed a dispositional format, such that individuals reported the extent in which they usually engage in the items listed when they are experiencing stress. COPE measures 15 individual coping mechanisms (four items per coping mechanism) listed as follows with internal consistency values (Cronbach alpha [95% CI]) from the present data computed for each: Focus on and Venting of Emotion (α = .81 [.78, .84]); Mental Disengagement (α = .38 [.28, .47]); Substance Use (α = .95 [.94, .96]); Denial (α = .80 [.77, .83]), Positive Reinterpretation and Growth (α = .76 [.72, .80]); Use of Instrumental Social Support (α = .85 [.83, .87]); Active Coping (α = .76 [.72, .79]); Religious Coping (α = .97[.96, .97]); Humour (α = .92 [.91, .93]); Restraint (α = .75[.71, .78]); Use of Emotional Social Support (α = .90[.89, .92]); Acceptance (α = .73[.69, .77]); Suppression of Competing Activities (α = .58[.51, .64]); and, Planning (α = .84[.82, .87]). Items are rated on a 4-point Likert-type scale (1 = *I usually don't do this at all;* 4 = *I usually do this a lot*). Sample items include: 'I get upset and let my emotions out' (Focus on and Venting of Emotion), 'I make a plan of action' (Planning), 'I laugh about the situation' (Humour), and 'I use alcohol or drugs to make myself feel better (Substance Use). Scores range from 4 to 16 for each coping mechanism with higher scores indicating greater use of the mechanism. Final scores for each individual coping mechanism are generated by computing the individual's item mean of the relevant responses. Psychometric research reported reliabilities of the subscales ranging from α = .45 – .92 (Carver et al., 1989).

Procedure

Participants completed the entire study online and anonymously using their own electronic devices at a time and location of their own discretion. The study title along with a link to the study was provided on the university's participant pool website and the university's online bulletin. Once participants clicked the provided link, they had access to the survey via FluidSurveys. Ethical approval was obtained from the Psychology Research Ethics Committee (Psy-REC #15-60), which is a fully-sanctioned Institutional Review Board designate of the university's Research Ethics Board. On the first page of the survey, participants were presented with consent information. They were informed that the study examined the association of distinct eating behaviours, personal attitudes, and responses to stress. Additionally, they were ensured anonymity, as well as confidentiality if anonymity was lost, and informed of the right to answer those questions that they feel comfortable with. They were informed that by completing and submitting the survey their consent was implied. On the following page, participants were first

presented with instructions for each questionnaire (demographic, EAT-40, DSQ-40, and COPE) that followed, and completed them accordingly. The order of the questionnaire was counterbalanced. At the top of each page, the scale of the questionnaire was displayed, as well as a progress bar to inform participants of how many pages they had left to complete. After participants submitted their data, a debriefing page was displayed. Participants were thanked, given further information of the nature of the study, and reassured of anonymity and confidentiality, should anonymity be lost. The study took less than 30 minutes.

Data analytic plan

Four primary sets of analyses were employed. First, we conducted an exploratory factor analysis (EFA) of the EAT-26 scale items to examine the factor structure of the scale in the present sample. The purpose was to extend prior research on the psychometric properties of the EAT-26 and to ascertain if the factor structure observed with the current sample paralleled that obtained in the construction sample (Garner et al., 1982). For this procedure, we used Mplus 7.4 (Muthén & Muthén, 2015), which employs default robust weighted least squares (WLSMV) estimation and Geomin rotation (an oblique method) to generate fit indices for EFA. The Comparative Fit Index (CFI) and Root Mean Residual Squared Error of Approximation (RMSEA) were computed to evaluate model fit and to compare fit across different factor solutions. Hu and Bentler (1999) note that CFI values around .95 and RMSEA values around .06 indicate acceptable model fit. EFA was used instead of confirmatory factor analysis (CFA) in order to obtain the best solution and fit generated by the data at hand, rather than attempting to force-fit the original EAT-26 scale structure to the data through CFA and potentially adding several parameters post hoc to maximise fit.

All remaining analyses were performed with SPSS 22.0. Second, bivariate associations were examined through correlating COPE and DSQ-40 scales with the EAT-26 AN scales and the BN scale. These analyses were intended to examine to what extent more maladaptive defence mechanisms and coping strategies were associated with increased self-reported eating pathology, and whether more salutary mechanisms and strategies were associated with decreased eating pathology. Correlations between continuous variables were evaluated in terms of effect size magnitudes of .10, .30, and .50, corresponding to effect sizes of small, medium, and large, respectively (Cohen, 1992). Third, three sets of regressions were computed in which linear combinations of defence mechanisms, coping strategies, or a combination of the two, were examined in the prediction of self-reported eating pathology (i.e., scores on the three EAT-26 subscales). Variables with significant bivariate relations with eating pathology were selected as candidate predictors in each of the regression models. As such, we based the regressions on theory in terms of how they were structured (re: the independence and effectiveness hypotheses) and the empirical results of the bivariate analyses to determine which predictors specifically were entered. This test would examine to what extent defence mechanisms and coping strategies were uniquely associated with self-reported eating pathology criteria as per the independence and effectiveness hypotheses.

Finally, we examined gender differences on each of the study measures through t-tests with Cohen's d computed to provide a measure of effect size, in which standardised mean differences values of .20, .50, and .80 correspond to effect sizes of small, medium, and large, respectively (Cohen, 1992). Missing data in the present study was extremely minimal with less than 0.3% of data points missing from the three study measures, and thus being 99.7% complete. As such, mean substitution was used as the most parsimonious method to estimate missing values for analysis.

RESULTS

Exploratory factor analysis of the EAT-26

Exploratory factor analysis was performed to identify latent constructs that underpinned the EAT-26 items and parallels in the factor structure in the factor structure between the current sample and the original construction sample. The Kaiser-Meyer-Olkin value of .923 met the acceptable threshold for factorability and three factors were extracted accounting for 47.2% of the total variance prior to rotation. The three-factor model generated acceptable fit to the data with CFI = .982 and RMSEA = .044 (95% CI = .037 to .050). Chi square difference tests demonstrated this model to be a significant improvement in fit beyond a tow factor model, $\chi 2$ (24) = 168.49, $p < .001$, which in turn was an improvement over a one-factor model $\chi 2$ (25) = 391.53, $p < .001$. As seen in the factor loading matrix (Table 1), each of the 26 items loaded on one of the three factors using a minimum loading criterion of .32, in which a given variable would account for a minimum of 10% of the variance in the factor upon which it load (Tabachnick & Fidell, 2007). In all, 16 of the 26 items (61.5%) loaded most highly on their original scale, while 21 of the 26 items (80.8%) loaded significantly on their targeted scale. Specifically, all 7 Oral Control subscale items loaded on the same factor, while 4 of the 6 Bulimia items loaded on a similarly named Dieting factor, with the remaining items cross loading. For continuity with past research, the original EAT-26 scale composition was retained for subsequent analyses.

Table 1
Exploratory Factor Analysis of EAT-26 Items: Factor Loading Matrix

Original scale loading	EAT-26 item	Current sample item loadings		
		Oral Control	Bulimia	Dieting
Dieting	I am terrified about being overweight.	.005	-.108	*.930**
Oral Control	I avoid eating when I am hungry.	*.580**	*.391**	.093
Bulimia	I find myself preoccupied with food.	*-.390**	*.923**	.008
Bulimia	I have gone on eating binges where I feel that I may not be able to stop.	.019	*.774**	-.036
Oral Control	I cut my food into small pieces.	*.490**	.007	.101
Dieting	I am aware of the calorie contents of foods that I eat.	-.103	.085	*.465**
Dieting	I particularly avoid food with a high carbohydrate content (i.e., bread, rice, potatoes, etc.).	*.365**	*.445**	.067
Oral Control	I feel that others would prefer if I ate more.	*.946**	-.027	-.045
Bulimia	I vomit after I have eaten.	*.751**	*.500**	-.180*
Dieting	I feel extremely guilty after eating.	.245*	*.468**	.359*
Dieting	I am preoccupied with a desire to be thinner.	.005	.056	*.865**
Dieting	I think about burning up calories when I exercise.	-.003	.012	*.528**
Oral Control	Other people think that I am too thin.	*.919**	-.009	-.185
Dieting	I am preoccupied with the thought of having fat on my body.	.296*	.013	*.787**
Oral Control	I take longer than others to eat my meals.	*.599**	-.063	.058
Dieting	I avoid foods with sugar in them.	*.348**	*.610**	-.107
Dieting	I eat diet foods.	*.519**	*.494**	-.069
Bulimia	I feel that food controls my life.	.027	*.866**	.024
Oral Control	I display self-control around food.	*.322**	-.249*	.029
Oral Control	I feel that others pressure me to eat.	*.847**	.026	.121
Bulimia	I give too much time and thought to food.	-.133	*.753**	.243*
Dieting	I feel uncomfortable after eating sweets.	.243*	*.554**	.145
Dieting	I engage in dieting behaviour.	*.362**	*.544**	.091
Dieting	I like my stomach to be empty.	*.651**	.252*	.208*
Dieting	I enjoy trying new rich foods	*.427**	-.247*	.277*
Bulimia	I have the impulse to vomit after meals.	*.711**	*.376**	.004

Note: * denotes significant loadings; loadings are italicized for items loading on a given factor; loadings in bold for items loading highest on a given factor. Scale name associated with the original item loading are bolded for items that load on their target scale in both the current and original construction samples.

Defence mechanisms, coping strategies, and eating pathology

Bivariate associations. To test Hypothesis 1, Pearson correlation coefficients were computed to examine the associations between participants' dimensional scores for each individual maladaptive defence mechanism with the Dieting and Oral Control subscales (AN traits) and the Bulimia and Food Preoccupation subscale (BN traits). As seen in Table 2, Projection, Splitting, and Somatisation correlated significantly with all three scales, while Passive Aggression, Acting Out, Displacement, and Rationalisation (negatively) correlated significantly with the Dieting, Bulimia, and Food Preoccupation subscales. The observed correlations were small to moderate in magnitude, and indicate that elevated eating disorder traits are associated with an increased use of predominantly immature defence mechanisms. Among the neurotic defence mechanisms, Undoing was significantly positively correlated

with the Dieting, Bulimia, and Food Preoccupation subscales while Pseudo-altruism was significantly associated with increased Bulimia and Food Preoccupation scores. Finally, Humour was significantly inversely associated with the Dieting scale, and was the only mature defence mechanism to be significantly associated with EAT-26 scores. Otherwise, very few of the mature or neurotic defence mechanisms demonstrated significant associations with eating pathology.

To test Hypothesis 2, Pearson correlations were computed to examine associations between participants' dimensional COPE scores with AN and BN traits. Contrary to Hypothesis 2, Substance Use was not significantly correlated with any eating disorder traits, although significant positive correlations were found between Behavioural Disengagement and two out of three EAT-26 subscales, and Mental Disengagement with Bulimia and Food Preoccupation scores. The pattern of finding suggested a small but significant association between the presence of traits indicative of eating pathology with self-reported use of mental and behavioural coping strategies. Although not formally predicted as part of Hypothesis 2, Focus on and Venting of Emotion and Denial were significantly positively correlated with scores from Dieting and the Bulimia and Food Preoccupation subscales, while Positive Reinterpretation and Growth and Restraint were associated with lower Dieting scores; Religious Coping was associated with increased Bulimia and Food Preoccupation scores.

Table 2
Correlations between Eating Attitudes Test-26 with Defense Style Questionnaire-40 and COPE Scale Scores

Measures	Eating Attitudes Test-26		
	Oral Control	Dieting	Bulimia
Defense Styles Questionnire-40			
Mature	.04	-.05	-.02
Sublimation	.03	.03	.06
Humour	-.01	-.12*	-.08
Anticipation	.03	-.01	-.01
Suppression	.05	-.05	-.03
Neurotic	.09	.12**	.13**
Undoing	.05	.17***	.18***
Pseudo-altruism	.09	.08	.10*
Idealisation	.12	.06	.04
Reaction formation	-.03	.02	.01
Immature	.13**	.22***	.17***
Projection	.11*	.26***	.17***
Passive aggression	.05	.14**	.10*
Acting out	.06	.16***	.14**
Isolation	.09	.07	-.01
Devaluation	.03	.08	.01
Autistic fantasy	.03	.10*	.09
Denial	.02	.05	.03
Displacement	.09	.26***	.26***
Dissociation	.03	-.04	-.03
Splitting	.13**	.14***	.11*
Rationalisation	-.09	-.13**	-.12*
Somatisation	.13**	.24***	.24***
COPE			
Focus on and venting of emotion	.01	.18***	.17***
Mental disengagement	.04	.08	.12*
Behavioural disengagement	.01	.12*	.10*
Substance use	.04	.07	-.01
Denial	.07	.14**	.13**
Positive reinterpretation and growth	.01	-.11*	-.05
Use of instrumental social support	.01	.04	.10*
Active coping	.01	-.03	-.02
Religious coping	.11*	.08	.08
Humour	-.01	-.07	-.04
Restraint	.01	-.12*	-.08
Use of emotional social support	.00	.06	.09
Acceptance	-.05	-.07	-.06
Suppression of competing activities	.10	.02	.05
Planning	-.01	-.02	-.02

Note. * $p < .05$. ** $p < .01$, *** $p < .001$

Regression models. To examine the first component of the third hypothesis (defence mechanism prediction of eating pathology), the DSQ-40 scales with significant bivariate associations were entered simultaneously to predict AN and BN traits through separate sets of regressions. Given that the Dieting scale had considerably larger number of significant associations with the DSQ-40 and COPE subscales than the Oral Control subscale, these two subscales were examined as separate AN measures in the regression analyses. Predictors with unique associations of $p < .10$ or stronger were retained for testing in the final defence mechanism-coping strategy model (to test Hypothesis 4).

The final defence mechanism regression models are shown in Table 3 to illustrate the most informative predictors of eating pathology. The linear combination of defence mechanisms significantly predicted each of the eating disorder criteria, accounting for 3% to 4% of the total variance. Splitting usage uniquely predicted Oral Control (i.e., food restriction) while Projection and Displacement usage were significant unique predictors of increased Dieting scores (i.e., fear of becoming fat, preoccupation with thinness) uniquely predicted higher levels of BN traits. Across all three models, Somatisation usage predicted each eating pathology criterion at $p = .067$ to .088, and thus this variable was retained for testing in the final combined defence mechanism/coping strategy model.

To examine the second component of Hypothesis 3 (coping mechanism prediction of eating pathology), a regression was conducted in which selected COPE scales based on significant bivariate associations were entered simultaneously to predict eating disorder traits (Table 4). Religious Coping, as the only significant predictor of Oral Control, naturally predicted scores on this scale via regression, while Focus on and Venting of Emotion and Denial significantly predicted Dieting (with Positive Reinterpretation and Growth retained for the final model). The two former variables uniquely predicted BN traits. Overall, the models tended to be weaker predictors of eating pathology than the defence mechanism scales, accounting for 1% to 7% of the total variance.

To examine Hypothesis 4, three sets of hierarchical regression analyses were conducted to predict eating disorder traits through entering the defence mechanism and COPE predictors that uniquely predicted these criteria from the previous regression analyses. As shown in Table 5, the Somatisation and Splitting defence mechanism usage along with Religious Coping incrementally and uniquely predicted Oral Control scores, accounting for 4% of the variance. In turn, self-reported use of the defence mechanisms of Projection, Displacement, and Somatisation incrementally predicted increased Dieting scores, while Positive Reinterpretation and Growth uniquely predicted decreased Dieting scores, accounting for 14% of the variance. Finally, only Displacement and Somatisation defence mechanism usage significantly and uniquely predicted BN traits, accounting for 10% of the variance. These results suggest that, consistent with Hypothesis 4, selected maladaptive defence mechanism uniquely predicted increased AN and BN traits. Contrary to Hypothesis 4, however, maladaptive coping strategies tended to bear little association with self-reported eating pathology, although in some instances, healthy coping predicted decreased eating pathology, specifically, fears of gaining weight/preoccupation with thinness (i.e., Dieting scores).

Table 3
Regression: Prediction of Anorexia Nervosa Traits (Oral Control and Dieting), and Bulimia Nervosa Traits by Individual Defence Mechanisms

Model predictors	*B*	*β*	*p*
Oral Control (AN)			
Splitting	.11	.10	.049
Somatisation	.10	.10	*.067*
Projection	.05	.04	.442
(Constant)	1.58		
	$R = .03$, $F(3, 425) = 4.30$, $p = .005$		
Dieting (AN) model predictors			
Displacement	.38	.19	.001
Projection	.40	.18	.001
Autistic fantasy	-.16	-.10	*.075*
Somatisation	.17	.09	*.088*
Splitting	.16	.08	.110
Rationalisation	-.19	-.08	.127
Humour	-.13	-.06	.205
Passive aggression	-.12	-.05	.337
Undoing	.07	.03	.518
Acting out	.06	.03	.562
(Constant)	3.11		
	$R = .14$, $F(10, 418) = 6.87$, $p < .001$		
Bulimia nervosa (BN) model predictors			
Displacement	.18	.18	.001
Rationalisation	-.13	-.11	.033
Somatisation	.09	.10	*.072*
Splitting	.08	.08	.135
Passive aggression	-.10	-.08	.152
Pseudo-altruism	.08	.07	.161
Undoing	.07	.06	.242
Projection	.06	.05	.354
Acting out	.01	.01	.784
(Constant)	-.53		
	$R = .11$, $F(9, 419) = 5.92$, $p < .001$		

Note: Significant predictors and p-values in bold font. Predictors associated at $p < .10$ retained for combined model in italics.

Table 4
Regression: Prediction of Anorexia Nervosa Traits (Oral Control and Dieting), and Bulimia Nervosa Traits by Individual Coping Strategies

Model predictors	*B*	*β*	*p*
Oral Control (AN)			
Religious coping	.11	.11	.019
(Constant)	2.80		
	$R = .01$, $F(1, 427) = 5.53$, $p = .019$		
Dieting (AN) model predictors			
Focus on/venting of emotion	.35	.15	.002
Denial	.37	.13	.028
Positive reinterpretation and growth	-.28	-.08	.061
Restraint	-.23	-.08	.101
Behavioural disengagement	.05	.02	.799
(Constant)	6.30		
	$R = .07$, $F(5, 423) = 6.09$, $p < .001$		
Bulimia nervosa (BN) model predictors			
Focus on/venting of emotion	.16	.13	.016
Denial	.15	.10	.088
Mental disengagement	.09	.07	.213
Instrumental social support	.06	.05	.323
Behavioural disengagement	.00	.00	.981
(Constant)	-1.64		
	$R = .05$, $F(5, 423) = 4.27$, $p = .001$		

Note: Significant predictors and p-values in bold font. Predictors associated at $p < .10$ retained for combined model in italics.

Table 5
Regression: Prediction of Anorexia Nervosa Traits (Oral Control and Dieting), and Bulimia Nervosa Traits by a Combined Defence Mechanisms and Coping Strategies Model

Model predictors	*B*	*β*	*p*
Oral Control (AN)			
Somatisation	.11	.11	.021
Religious Coping	.10	.10	.035
Splitting	.11	.10	.042
(Constant)	1.14		
	R^2 = .04, $F(3, 425)$ = 5.63, p = .001		
Dieting (AN) model predictors			
Projection	.39	.18	.001
Displacement	.35	.17	.001
Somatisation	.19	.11	.042
Positive reinterpretation and growth	-.26	-.10	.042
Autistic fantasy	-.15	-.09	.072
Focus on/venting of emotion	.16	.07	.159
COPE Denial	.12	.04	.395
	R^2 = .14, $F(7, 421)$ = 9.49, p < .001		
Bulimia nervosa (BN) model predictors			
Displacement	.18	.17	.001
Somatisation	.12	.13	.014
Focus on/venting of emotion	.08	.07	.171
Rationalisation	-.08	-.06	.175
COPE Denial	.08	.06	.243
(Constant)	.62		
	R^2 = .10, $F(5, 423)$ = 9.52, p < .001		

Note: Significant predictors and p-values in bold font. Predictors associated at $p < .10$ retained for combined model in italics

Summary of predictive associations. Figure 1 provides a basic summary graphic illustration of the prediction effects across correlation and regression analyses for the number of statistically significant associations of individual defence mechanisms and coping strategies with eating disorder trait scores. As seen in this figure, the core maladaptive defence mechanisms of Somatisation, Projection, Displacement, and Splitting generated the largest number of significant associations with eating disorder traits. By contrast, the individual coping strategies were less frequently significantly associated with eating pathology across the range of correlation and regression analyses; the individual coping strategies were both less frequently predictive as well as simply having a smaller raw number of observed associations proportionate to the number of strategies measured and statistical tests conducted.

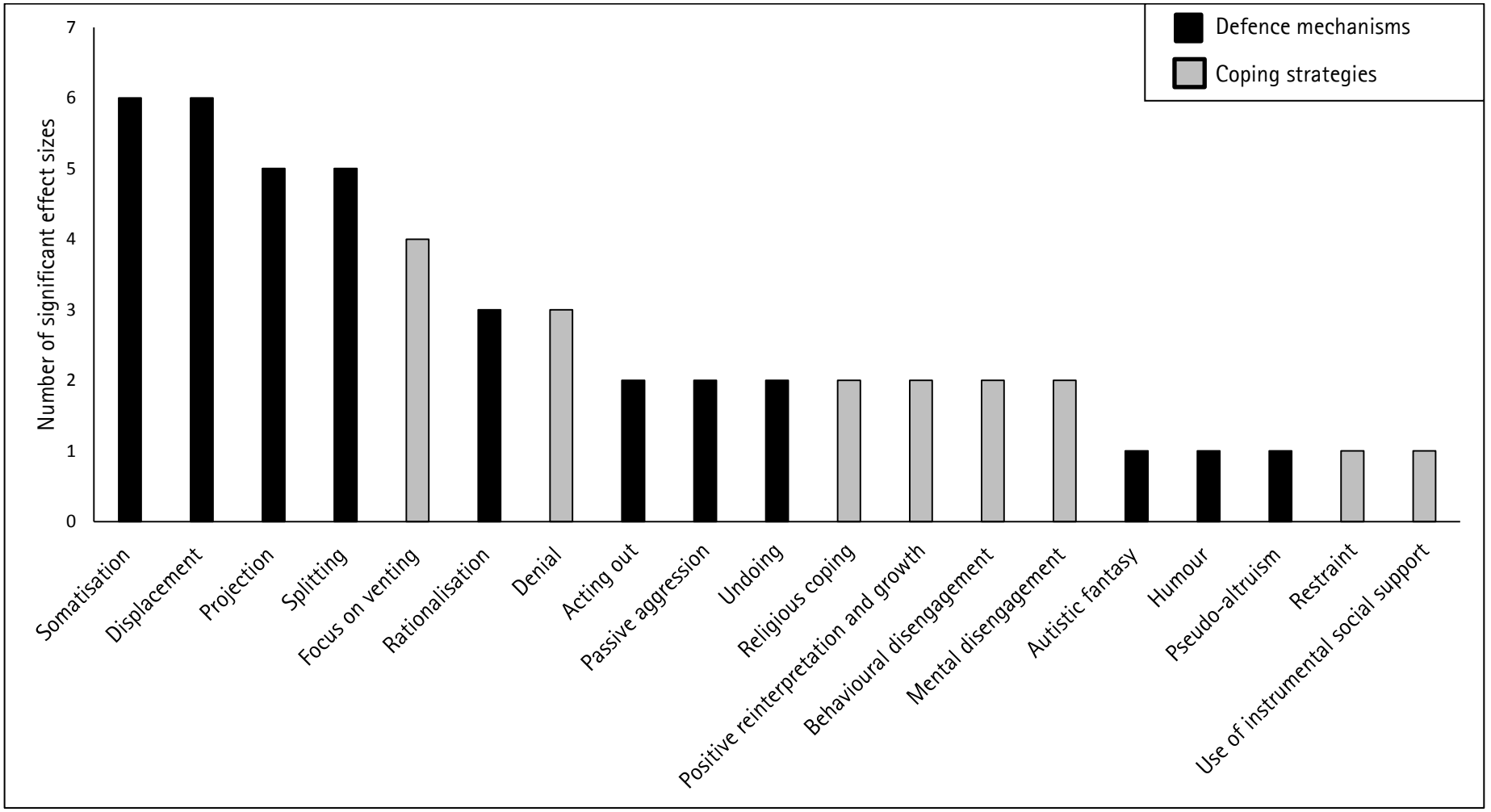

Figure 1. Graphic Illustration of Number of Statistically Significant Effect Sizes in the Prediction of Eating Disorder Traits for Individual Defence Mechanisms and Coping Strategies.

Gender comparisons on self-report measures

To compare differences between females and males on all self-report measures, a series of independent samples t-tests were conducted. Cohen's *d* was also computed as a measure of effect size (Table 6). For both genders, the mean scores for EAT-26 total and subscale scores were below the midpoints, indicating that participants had relatively low degrees of eating disorder traits. For the DSQ40, participants' mean scores were above the midpoint for mature defence mechanisms, approached the midpoint for most neurotic defences, and below the midpoint for immature defence mechanisms, indicating frequent self-reported use of mature defence mechanisms and relatively infrequent use of immature defences. In turn, participants' mean scores on individual coping strategies were below the midpoint for Behavioural Disengagement, Substance Use, Denial, Religious Coping, and Humour, suggesting infrequent self-reported use of these strategies relative to other coping mechanisms, which were above the midpoint.

Gender comparisons demonstrated that females scored significantly higher than males for eating disorder traits by nearly one-third to one-half of a standard deviation (d = .29 to .44), particularly on Dieting and Bulimia subscales, consistent with hypothesis 5; there were no differences in Oral Control. For many of the defence and coping mechanisms, differences between females and males were small and frequently non-significant; however, males reported significantly higher self-reported use of individual defence mechanisms that include humour, suppression, denial, dissociation, splitting, and rationalisation while females reported higher use of displacement and somatisation (i.e., the unique predictors of eating disorder traits). For the individual coping mechanisms, females self-reported greater use of Focus on and Venting of Emotion, Use of Instrumental Social Support, and Use of Emotional Social Support while male reported significantly greater use of Substance Use, Humour, Restraint, and Acceptance.

DISCUSSION

The present study examined the extent to which individuals with higher levels of eating disorder traits reported greater usage of maladaptive defence mechanisms and coping strategies compare to those reporting fewer eating disorder traits. This study also aimed to identify the specific mental mechanisms that best predicted eating disorder traits, which to our knowledge has been sparse in previous research. Consistent with study hypotheses, individuals with elevated AN and BN traits, broadly speaking, reported using more maladaptive defences and coping strategies; however, this association was more evident for defence mechanisms given the larger number of predictors which were also higher in their relative magnitudes of association. As per Hypotheses 3 and 4, maladaptive defence mechanisms, specifically displacement and somatisation, were the most consistent predictors of eating disorder traits, given that high self-reported use of these mechanisms most frequently incrementally predicted eating criteria after controlling for coping mechanisms and other associated defences. This was most evident for those AN traits associated with fears of gaining weight and preoccupation with thinness (i.e., Dieting subscale); however, pertaining to food restriction (i.e., Oral Control subscale), although somatisation was predictive, there were no largely predictive defence or coping mechanisms. Although self-reported use of maladaptive defence mechanisms were the strongest predictors, self-reported use of adaptive coping (i.e., positive reinterpretation and growth) also predicted decreased eating pathology concerning fears of gaining weight and preoccupation with thinness.

Some psychological processes of eating pathology

The finding that individuals with elevated AN and BN traits reported a high use of defences that can be subsumed by the maladaptive defence style more than those with fewer traits is consistent with previous research examining eating disorders and eating disorder traits (e.g. Steiger et al., 1990; Steiger & Houle, 1989; Stein et al., 2003; Steiner, 1989). While maladaptive individual defence mechanisms of projection and displacement have been linked to eating pathology in past research (Gothelf et al., 1995; Poikolainen et al., 2001), the present study also identified several other maladaptive individual defence mechanisms used more heavily by those with elevated AN and BN traits including somatisation, splitting, and passive aggression. These specific mechanisms have been less examined in previous literature, perhaps given that measures of individual defence mechanisms are highly variable.

Moreover, that individuals with certain elevated AN and BN traits are more inclined to report to use maladaptive avoidance coping (e.g., mental and behavioural disengagement) more frequently than individuals with lower traits is consistent with prior findings (e.g., Mayhew & Edelmann, 1989; Troop et al., 1994) although the associations observed in the present study were comparatively small in magnitude. While the present study conducted a more nuanced examination of specific coping strategies, such as the individual mechanism that underpin avoidance coping, previous research has tended to examine avoidance coping more broadly to generate larger in magnitude findings (Troop et al., 1994; Troop et al., 1998). In addition, other individual coping mechanisms that had somewhat greater use by those with elevated AN and BN traits, including Focus on and Venting of Emotion and Denial, may not be particularly adaptive. Carver et al. (1989), for instance, found that Focus on Venting of Emotion and Denial were moderately correlated with mental disengagement, behavioural disengagement, and substance use and inversely correlated with more adaptive strategies (e.g., active coping). It seems reasonable then that such defences may have maladaptive behavioural correlates.

The present study findings have implications regarding some possible psychological processes of eating pathology, although they do not exactly confirm or refute either of the models depicted earlier regarding the interrelations of defence and coping mechanisms. For instance, in terms of the independence hypothesis, it was demonstrated that selected defence mechanisms broadly predicted increased AN and BN traits while selected coping mechanisms seldom predicted decreased AN and BN traits (i.e., Positive Reinterpretation and Growth, exclusively for the AN trait of fear of gaining weight and preoccupation with thinness). In terms of the effectiveness hypothesis, it was found that certain individual maladaptive defence mechanisms uniquely and incrementally predicted increased AN and BN traits while one adaptive coping mechanism did not predict increases nor did adaptive defences predict decreases in AN and BN traits. It seems at least in the present sample, more weight may be afforded to the effectiveness model given that there were distinctions within defence mechanism usage to demonstrate that maladaptive defence mechanisms were unique from other defence styles, particularly, the adaptive defence style, in the prediction of eating disorder traits.

At a broad level, there seemed to be more similarities than differences in the psychological processes associated with higher levels of AN, specifically fear of gaining weight and preoccupation with thinness, and BN traits. While many defences and individual coping strategies emerged at the bivariate level, the immature defences of displacement and somatisation, most noticeably, uniquely and significantly predicted higher levels of most traits in the final regression model after controlling for relevant coping mechanisms and associated defences. In displacement, an impulse is behaviourally expressed toward a less threatening target; as this may apply to eating pathology, this may be conceptualised as punishment turned inward with the self-posing as more suitable and less threatening target than the original sources of the stressor, such as an authority figure (e.g., parent, supervisor).

Somatisation, however, refers to the generation of bodily reactions to stress, for instance, developing a physical illness or symptoms, which in turn may reflect an unresolved conflict. There is a highly visceral

component to eating disorders and this defence; an interpretation is that eating pathology is a somatic response to psychological conflicts and emotional disturbances expressed through behaviours such as restricting, purging, and weight fluctuation that characterise these syndromes. Clinical testimonials of patients with eating disorders attest to the restricting behaviours done to wrest some form of control (particularly for AN), in this case over one's own body, within the context of a chaotic world where they have little control over much else. On the other hand, it is possible that somatisation is simply a consequence of a high level of eating disorder traits, which naturally can lead to a host of physical symptoms and medical complications. Given the correlational nature of this research design one cannot know if these defences are a potential cause or consequence of eating disorder traits.

Although the present study featured a non-clinical sample, findings such as these can have clinical relevance. Arguably, any observed links between self-reported defence usage and eating disorder traits may be intensified if clinically diagnosed and non-diagnosed individuals were compared. Tentatively, the present study findings could suggest that individuals with AN and BN have indicators of personality pathology. A high self-reported use of certain maladaptive defence mechanisms may be risk factors for, or at the same time consequence of, eating disorders. On the other hand, the concordant self-reported use of adaptive defence and coping mechanisms, with the exception of Positive Interpretation and Growth for some AN traits, do not appear to be protective against eating pathology, at least not in the present sample. Given that individuals with eating disorders often report more stress that non-eating disordered individuals (Miller, 1988), interventions that focus on how patients manage stressful experiences would seem to be a natural intervention target. For instance, therapeutic foci that include decreasing reliance on maladaptive defence mechanisms, replacing these with more adaptive mental mechanisms, may have salutary effects. The benefit may lie less in the use of adaptive strategies than in relinquishing certain maladaptive strategies.

Limitations, future directions, and conclusions

There are some design features of the present study that constitute limitations such as the limited generalizability (e.g., owing to a predominantly White, female, young, university sample) that is endemic to university-based behavioural research, an inability to form causal inferences (i.e., due to the correlational nature of the design as already discussed), and the potential for impression management biases to influence results (i.e., owing to a reliance on self-report measures). Additionally, multiple ANOVA employed to analyse differences between females and males may have slightly increased the likelihood of Type 1 error. Nevertheless, two additional limitations specific to this research seem germane.

First, the present study did not receive approvals to solicit information from participants as to whether they had ever received a formal eating disorder diagnosis or to employ a clinical sample. Rather, linear relations were examined with dimensional measures of eating disordered traits, and potential theoretical, aetiological, and clinical influences were made from this. Although individuals with high eating disorder traits and those diagnosed with an eating disorder are not necessarily the same, we believe meaningful inferences can still be drawn, as similar findings to these have been obtained elsewhere when eating pathology has been operationalised at the trait-level or by clinical diagnosis (e.g., Stein et al., 2003; Steiner, 1989). A second potential limitation concerns the use of a self-report questionnaire to assess defence mechanisms; as defence mechanisms are ostensibly unconsciously activated, scholars dispute to what degree self-report questionnaires are a valid medium for assessing such domains of psychological functioning (Andrews et al., 1993; Cramer, 1998). Andrews et al. (1993) cogently argued that individuals are often aware (usually in hindsight) of the outcomes of operations of unconscious processes. Additionally, certain attitudes and beliefs are indicators of the consistent use of a defence because repeated usage of a defence mechanism could leave measurable traces in these systems (Andrews et al., 1993).

There are also several avenues for future directions in this area of research. First, one could certainly replicate and extend the study with individuals clinically diagnosed with AN and BN. Few studies, if any, have ascertained which personality features (e.g., defence or coping mechanisms) are a better predictor of eating disorder diagnosis or which may predispose someone to this. Thus, replicating this study with clinically diagnosed individuals could create therapeutically meaningful inroads. A second avenue involves employing a similar research paradigm but using different measures. As discussed above, self-report measures, particularly for defence mechanisms, are controversial. Future research may benefit from the use of projective tests, such as the thematic appreciation test, to assess defence mechanism usage. Such further strategies may help refine models that describe the relation between defence and coping strategies in terms of eating disorder traits to have achieved greater theoretical and clinical impact.

In conclusion, the present study collected quality data on a non-clinical university sample to inform the interrelations of defence mechanisms, coping strategies, and eating pathology. Research on eating pathology is crucial given that, compared to many other mental illness, individuals with eating disorders have one of the highest risks of premature death (Harris & Barraclough, 1998). Future applied research may inform clinical efforts to intervene with this important health problem.

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Emotional intelligence in teaching: Comparison between teacher-practitioners in the United Kingdom and India

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Evidence demonstrates that an increase of emotional intelligence levels leads to work productivity and effectiveness. Within this study, emotional intelligence levels were examined between practitioners from the UK and India. Teacher-practitioners completed a self-report measure of emotional intelligence following email contact. Results demonstrate that cross-cultural emotional intelligence scores were moderately high for teacher practitioners in the UK and India. Furthermore, overall scores demonstrated that female practitioners scored higher in emotional intelligence than male practitioners. In relation to gender differences it was also evidenced that male and female Indian practitioners scored higher in emotional intelligence than those from the United Kingdom. In addition, emotional intelligence data for age identified that maturity and experience led to higher scores. The subdomain of self-awareness was integral to the relationship between increased emotional intelligence and other associated subdomains. One limitation of the research resonates to the use of a predominant quantitative design. Future research should focus on adoption qualitative methodology that would enable greater depth and regression analysis.

Keywords: emotional intelligence, gender, teaching, teacher-practitioners, self-awareness

BACKGROUND

The education system provides younger generation with opportunities to achieve qualifications through an established and structured framework. To facilitate this framework, teacher-practitioners are employed to deliver and support learners with curriculum and assessments. In addition to curriculum and assessment design one should also be considerate of personal well-being issues that impact learners. Arguably, rising insecurities of modern lifestyle can impact on emotions for learners. Within the education system, learners look for guidance and support both on academia and emotional and social issues. Therefore, it should be acceptable that practitioners play an instrumental role to engineer the required delivery in the development of learners. To this extent, teacher-practitioners are required to employ an array of strategies to support teaching and self-development of learners. Dealing with these emotional and social issues could equate to the connection that teacher-practitioners have to deal with an array of emotion-regulatory practices. For instance, teacher practitioners are tasked with assessing the emotions of learners they teach and monitor how they cope. Emotive regulatory practices are connected to the construct of emotional intelligence (EI).

The concept of EI, according to Salovey and Mayer (1990) alludes to the ability to monitor one's own and others' feelings and emotion that guide one's thinking and actions. Further, in confirming the utility of EI a number of meta-analysis have demonstrated effectiveness (Joseph & Newman, 2010; Schutte, Malouff, Thorsteinsson, Bhullar, & Rouke, 2007; Van Rooy & Viswesvaran, 2004).

Research has identified that the emotional competence of practitioners must be suitability built through developed skills (Sutton & Wheatly, 2003). It is proposed that enhance emotional competence should enable teacher-practitioners to develop personal well-being and effectiveness of learning processes to supplement socioemotional development of their learners. Generally, it is observed that students who are nurtured by teacher's demonstrating high level of EI tend to, directly or indirectly absorb emotional skills. Based on this nurture from within the school environment learners can learn to manage their own issues, which eventually help them to perform better in further education and university. Further, Brackett and Katulak (2006) have suggested that EI training allows schoolchildren to improve their interpersonal relations with peers and teachers. These interpersonal relations can be aligned to delivering education and is surmountable to building student emotional and social well-being. In consideration of the research presented within education circles it would be pertinent to consider the applied practice relative to EI as it engineers the process of life skills.

Comparative research within EI and education is important as it can evidence some useful indicators of effectiveness. To this degree, evidence exists that highlights the impact of EI within primary and secondary school curriculum. For example, evidence suggests that the curriculum needs to be efficacious enough to reduce emotional and behavioural problems from an early age, which can interfere with the learning process (Caplan et al., 1992; Cohen, 1999) as cited in Vandervoot (2006). In legislative terms, the Every Child Matters legislation in England (DfES, 2004) places pupil emotional well-being as a central concern and studies reveal the benefits to pupils when EI is integrated into the school curriculum (e.g., Qualter, Whiteley, Hutchinson, & Pope, 2007).

To substantiate this further, Schutte, Malouff and Thorsteinsson (2013) advocated the use of EI training to support improved performance and success among learners. While the authors are cautious with their findings they believe that there is a good predictive evidence to support the efficacy of EI in education. The evidence above was a follow-up study to Schutte and Malouff (2002) that demonstrated a relationship between EI and success that were observed between a control-group and non-control group of learners. Results highlighted that learners who received EI training were more likely to continue with their course of study. Also, learners in a control group were provided with EI training and results

highlighted better retention rates. High retention levels are important as they correlate with increased success and it also provides funding for courses (King, Lemons, & Hill, 2012).

In acknowledging the role of EI in education it would be prudent to examine avenues that support teaching practices. A model that is cognizant to educational practices is the Goleman (2004) model of EI. There are five subdomains of the Goleman model that relate to self-awareness, management of emotions, motivation, empathy, and relationship management. In postulation, the teacher-practitioner who is self-aware is likely to manage their emotions, employ effective motivation strategies, is empathic with learners, and can manage relationship among peers. Therefore, it would be prudent to consider the Goleman model and explain the use of each subdomain of EI in education.

Self-awareness is a core subdomain of the Goleman model. Characteristics of self-awareness emanate to recognising own moods and emotions and the effects these have on others. A body of research has quantified the importance of increasing opportunities for self-awareness through regulatory practices (Barling, Slater, & Kevin Kelloway, 2000). An example of increasing self-awareness is formed through the strategy of reflective practice to develop own strengths and work on limitations (Osterman, 1990). Arguably, education practices require teacher-practitioners to maintain high levels of self-awareness in order to harness students they educate.

The management of emotions is the second aspect of the EI model and relates to the ability to control emotions. Hill and Taylor (2004) outlines: (i) learn about themselves; (ii) cope with stress and job demands; and, (iii) deal with emotions. Practitioners are required to manage their emotions during different situations that include: marking works, preparing assessments, and lesson planning. Therefore, if emotionally-intelligent teachers are able to perceive and regulate their own emotions – which may self-reinforce their own teaching practices – it can increase workplace engagement and reduce burnout.

A third aspect of the Goleman model and one that is integral to educational practices is motivation, which relates to the inner drive that provides stimulus for teaching from which teacher-practitioners are faced with the task of motivating their leaners and oneself. Therefore, through a systematic approach one could develop strategies to increase or maintain motivation levels. The enjoyment of specific goal setting could arguably supplement the systematic approach in order to improve motivation and performance levels (Durlak, Weissberg, Dymnicki, & Schellinger, 2011). Arguably, setting targets and goals is associated to both intrinsic and extrinsic motivation (Locke & Latham, 2012). Teacher-practitioners can associate the value of motivation both to their own teaching and to learner requirements.

A fourth aspect of the Goleman model of EI is the use of empathy, which is related to having the ability to understand other people and its considerable use in education would be supportive to teaching practices. Key characteristics of empathy that are trained as a result of these exercises include recognition, listening, imagining, and experiencing other emotions. There is arguably an association between increased empathy and its link to increased levels of EI. For instance, Gentry, Weber, and Sadri (2007) suggest that through building empathy, opportunities for increased productivity emerge. Strategies to build empathy levels can surmount to developing teamwork exercises that engage listening and problem solving tasks. Based on these activities, one would presume that teacher-practitioners are affording students opportunities to examine views and reasoning.

The final aspect of the Goleman model is relationship management which is the ability to develop skills and strategies in managing others. Research (Arefi, 2010) has advocated that the efficacy of EI relates to building relationship management, leadership skills, alluding to self-awareness and control of emotions. Given this contention, one could identify that these skills align closely to education and to the

role of teacher practitioners. For instance, one should assume that teacher-practitioners are required to build effective relationship among colleagues and students. Further, leadership qualities need to be evident when dealing with the management of learners and teaching. Arguably, teacher-practitioners need to manage their relationships with those they teach, as it fosters greater engagement and support to increase performance levels. In examining leadership relationships it was suggested by Gardner and Stough (2002) that effective leadership would relate to commitment, greater success, and positivity to improve working relationships. Arguably, roles within education would surmount to similar outcomes and teacher-practitioners are most likely to succeed if they aid relationship management.

In consideration of the literature, it has become important to assess the potential impact of EI on education practices in the United Kingdom and India. It was therefore decided to examine cross-cultural and comparative differences between teacher-practitioners to overall EI scores, gender, and age. The purpose of this study is to form how EI can inform teaching practices and what strategies can be employed to increase utility in the workplace.

METHODOLOGY

Participants

There are 214 participants (Age: $M = 39.43$ years, $SD = 2.92$) who volunteered their consent. Age ranges were (23–27, $n = 15$); (28–32, $n = 28$); (33–37, $n = 34$); (43–47, $n = 39$); (48–52, $n = 24$); and, (53–57, $n = 18$). Participants were main grade teachers or lecturers who were contacted in person and through email and were advised on how to complete the questionnaire.

Measure

To measure various dimensions of EI, the Practical EQ Emotional Intelligence was used in this study. The Practical EQ is a self-report measure that offers opportunities for assessing participants' EI. The Emotional Intelligence Self-Assessment Questionnaire is a five-competency model (Goleman, 2004) based on self-awareness, self-management, motivation, empathy, and relationship management, Each section has five questions with score nagging 0 (almost never) to 5 (almost always). There are a total of 25 questions of which nine are reversed scores. Examples of questions include: 'I understand the feedback that others give (self-awareness).'; 'I can stay calm even in difficult circumstances (self-management).'; 'My career is moving in the right direction (motivation).'; 'It is unpredictable how my colleagues will feel in any given situation (empathy).' and, 'I feel uncomfortable when other people get emotional (relationship management).' Utilising the Emotional Intelligence Self-Assessment Questionnaire allowed participants to assess their own EI from which researchers could interpret data and provide useful strategies to support practitioners.

Procedure

Ethical and legal considerations were taken into account and all participants completed the informed consent forms. In addition, participants were made aware of confidentiality and were informed of their rights to withdraw. Following contact, all participants were instructed to complete the questionnaire.

Data analysis

Quantitative data analysis would take place following the submission of questionnaires to form association with identified aims and objectives. The form of data analysis was carried out using quantitative date practices. Using Excel and SPSS software, charts and tables were created in order to outline the results.

RESULTS

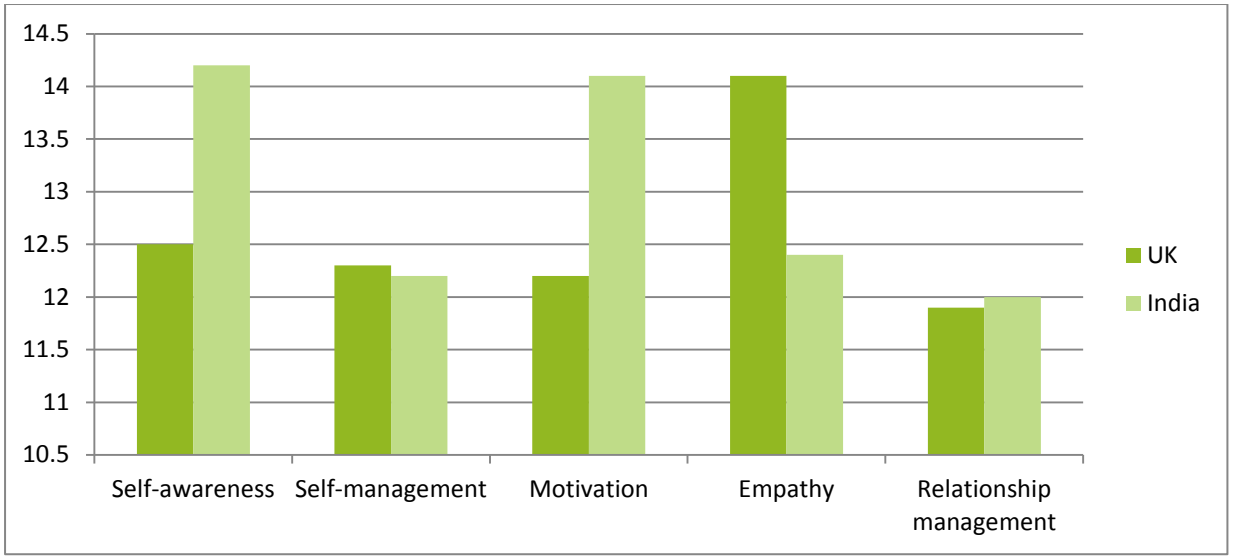

Figure 1. Overall average scores of EI dimensions obtained from teacher-practitioners from the UK and India

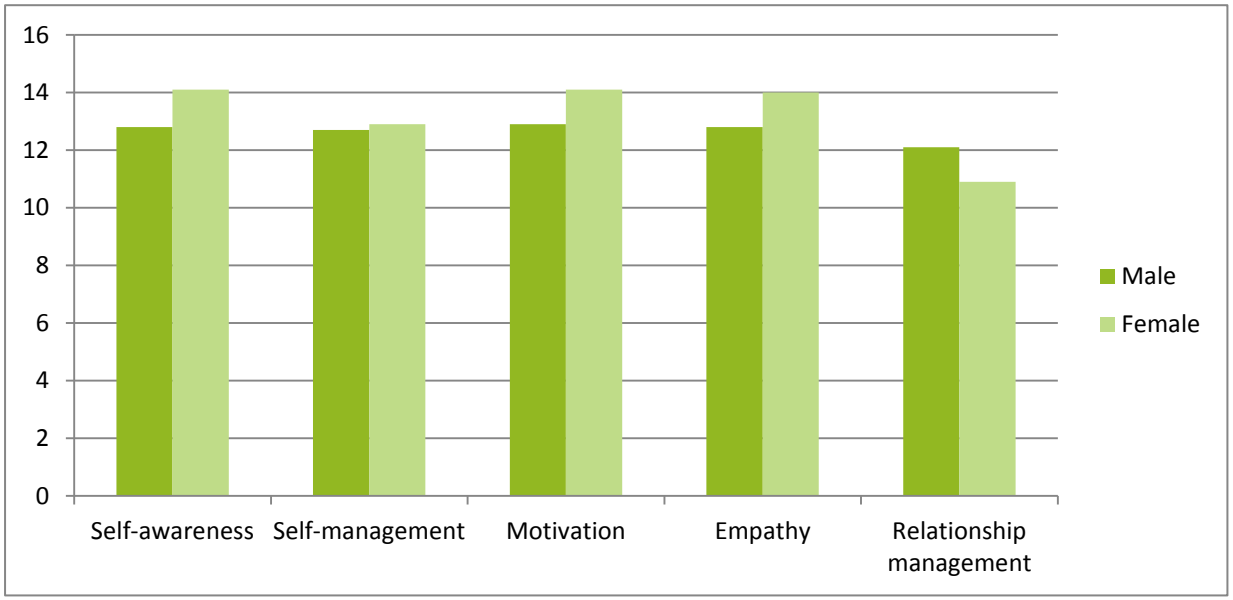

Figure 2. EI scores between gender in the UK and Indian teacher-practitioners

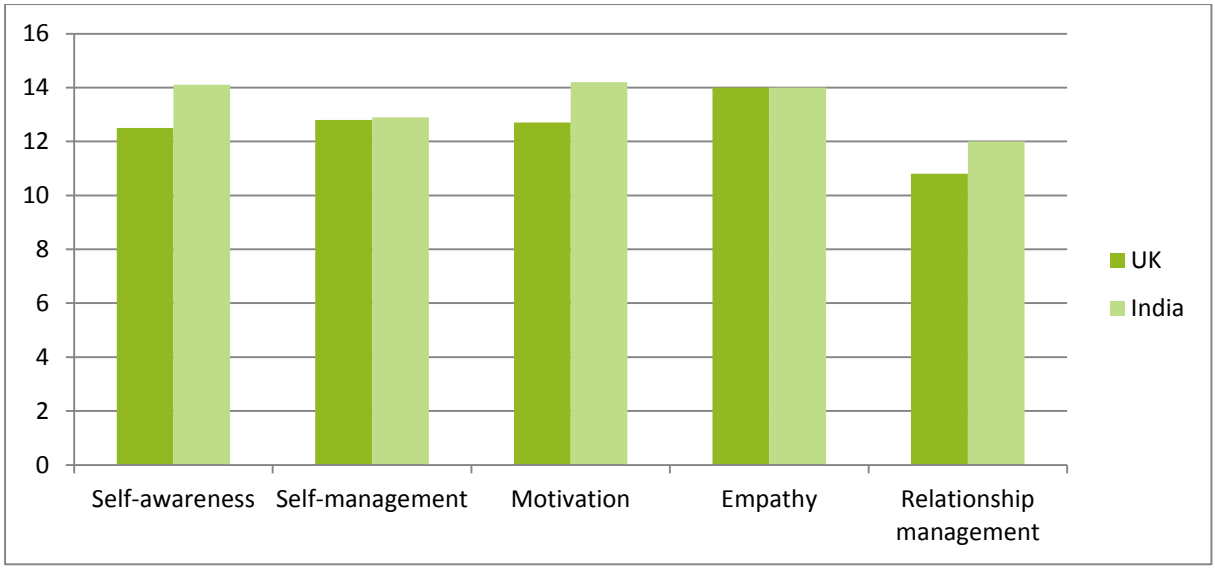

Figure 3. EI scores differences between male teacher-practitioners in the UK and India

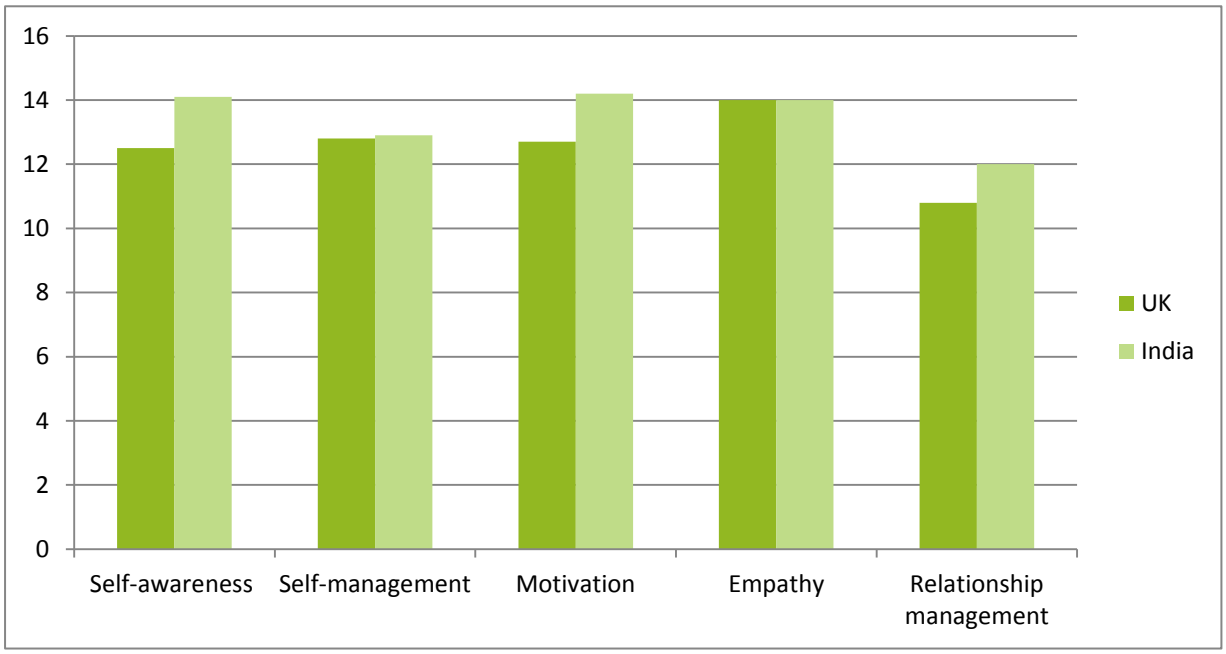

Figure 4. EI scores differences between female teacher-practitioners in the UK and India

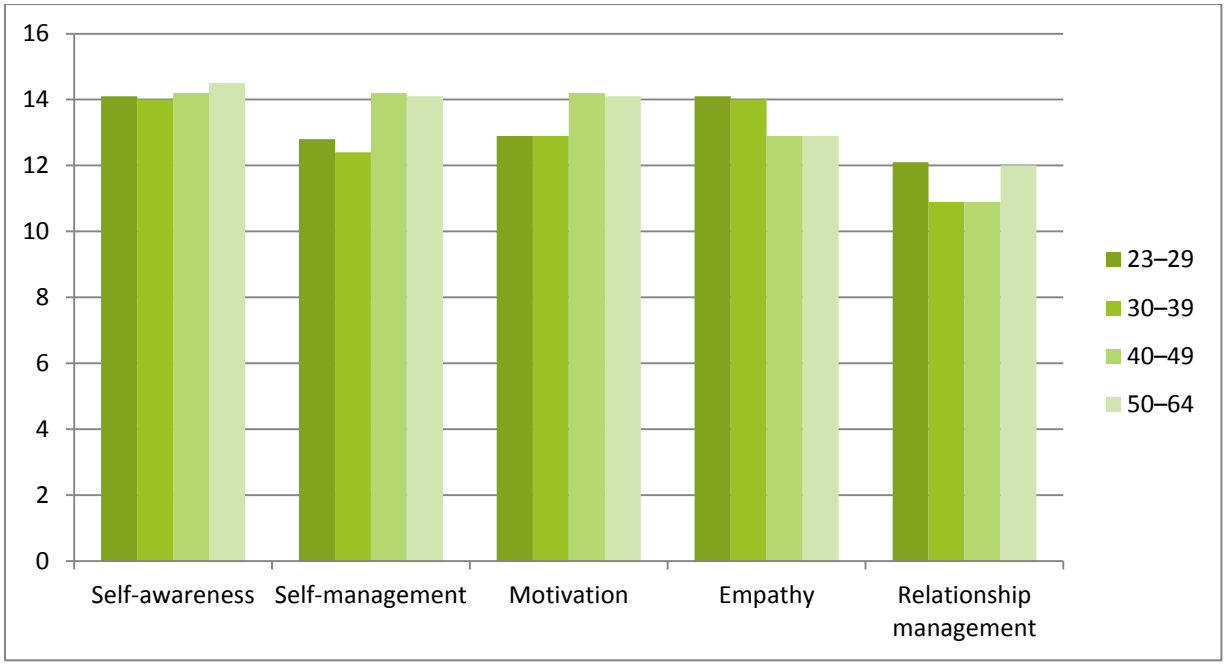

Figure 5. EI scores and age between teacher-practitioners in the UK and India

DISCUSSION

The purpose of the present study was to explore the nature of EI among teacher-practitioners in the UK and India. An exploration of EI in education is important because practitioners have to deal with challenges that associate to emotional output. Therefore, the purpose of this discussion will examine the difference of EI scores between teacher-practitioners in the UK and India. The utility of EI and its proposed practical association to education will be applied through research evidence. This work proposes potential applied practices that could enhance collaboration between colleagues and outlines limitations of this study.

EI scores reported for practitioners from the UK and India were moderately high. The subdomain overall scores for self-awareness and empathy recorded highest among practitioners. Scores for self-management and motivation align with evidence which states that the management of emotions lead to greater direction and focus (Latham & Piccolo, 2012; Schutte, Malouff, & Thorsteinsson, 2013). Conversely, scores for the subdomain of relationship management recorded lowest on the Goleman model. It could be argued that the first four subdomains of EI relate to oneself and that relationship management relates to dealing with others. However, one should be cautious with this interpretation as a number of variables may construe this argument as unsupportive and speculative. Therefore, a clearer examination of how these results relate to the intended aims and objectives require explanation.

EI scores for gender reported that females outscored males on four of the five subdomains, equating to 90% of the data. Previous research (e.g., Brackett & Mayer, 2003; Ciarrochi, Chan, & Caputi, 2000) have supported the notion that females report higher levels of EI than males. However, there is considerable debate on which specific EI dimensions females perform better (e.g., Day & Carroll, 2004; Farrelly & Austin, 2007; Livingstone & Day, 2005; McIntyre, 2010). Therefore, implementing a meta-analysis would be useful in context when assessing relationships between gender scores and EI scores. A meta-analysis performed by Joseph and Newman (2010) highlighted that females obtained higher scores than males on EI dimensions. Assessing the data from the current study identifies that both male and female teacher-practitioners from India scored higher in EI than those from the UK. Although caution should be

taken with the interpretation of gender scores, there is useful information in attempting to understand the relationship between EI differences and gender.

The EI scores by age highlighted that for three of the subdomains (self-awareness, self-management, and motivation) experienced teacher-practitioners scored highest. Interestingly, subdomains of empathy and relationship management highlighted that younger teacher-practitioners scored highest, although this was marginal. Harrod and Scheer (2005) identified a correlation between EI and age as it was suggested that older participants were more likely to be self-aware and reflective of emotions than younger participants. The study lends support to the growth in literature that suggests EI can change with life experiences and is learnable (Goleman & Cherniss, 2001; Schutte, Malouff, & Thorsteinsson, 2013).

While it was identified that increases in age lead to higher EI scores, it would be unfair to discount that younger age and less experience doesn't correlate with enhanced EI. This would not be a true reflection and discounts many younger participants who exhibit higher levels of EI than some experienced participants. In assessing the extant literature it suggestive that EI can be learned through trainability (Schutte, Malouff, & Thorsteinsson, 2013). As a result, it is worthy of consideration that both educators and students should engage with EI because it is vital to learn and manage emotive skills (Goleman & Cherniss, 2001). Incorporating EI in education is particularly important because as Barchard (2003) suggests that modern educational systems do not promote EI. Developing EI would provide students with opportunities to recognise and handle emotions – leading to effective emotional output.

The data within the present study identifies self-awareness as a core component of EI with the Goleman model. The evidence presented in the results suggests that self-awareness levels between teacher-practitioners in the UK and India are similar. One proposal forwarded related to an increase in staff development practices with teams to facilitate productivity and effectiveness. Research has indicated that self-awareness aligns to emotions and moods that are self-driven (Salovey & Mayer, 1990). The data presented in this research highlights that increased self-awareness allowed practitioners to become aware of their own emotions and actions in the workplace. Mousavi, Sarboland, Sarboland, and Jahangirzade (2012) contend that through processes of thought and emotion, individuals can remodel behaviour to enhance motivation levels through specific goal setting (Locke & Latham, 2002). Therefore, given the contention that self-awareness is core to the emotional intelligence rubric it is suggested by the researchers that increases in this area could enhance other subdomains.

IMPLICATIONS

This work proposes that practitioners self-manage themselves and support others through directed use of strategies. These strategies could be evidenced through varies methods of goal setting, participation in physical activity to maintain psychological balance, regulating mood and emotion through listening to music and completing short activities. In advocating the increase and maintenance of self-awareness it could be proposed to employ learning journals that are completed as an ongoing process to support practitioners. In addition to the outlined strategies proposed, two key mechanisms to support self-awareness include reflective practice (Gill, 2014) and profiling (Gee, Marsall, & King, 2010; Newman & Crespo 2008). Through employing these strategies, teacher-practitioners can identify strengths and areas to improve teaching practices. It is argued that reflective practice and profiling will enable teacher-practitioners to identify greater opportunities to increase levels of self-awareness aligned to setting specific goals (Locke & Lotham, 2012).

Although useful information within this study exists it would be prudent to offer limitations. The study allowed the researchers to carry out simple data techniques but these were not robust enough to examine relationships in greater depth and clarity to allow causality to be discussed. Thus, although the

information gathered and resulting data interpretation was invaluable, future research should explore more complex data techniques. One suggestion to overcome these limitations would be to reassess the methodology incorporated and utilise more qualitative semi-structured methodology.

CONCLUSION

Research has advocated the effectiveness of EI in relation to work productivity and effectiveness (Joseph & Newman, 2010; Van Rooy & Viswesvaran, 2004). The current study advocated the use of the Goleman model to assess EI within educational practices of teacher-practitioners. It is proposed that educational institutions and awarding bodies engage with EI practices and implement these into curriculum designs and teacher training packages. Arguably, EI is an important life skill that can support performance levels and so this opportunity should not be ignored. One of these opportunities can be designed through the exploration of holistic staff development among teacher-practitioners to share best practices. Furthermore, it is proposed that curriculum designs are adapted to consider enhancing EI among teacher-practitioners and students. This study has identified that EI is crucial and integral in educational practices to facilitate both teacher practitioners and student practices. Increasing future collaborations would be a useful implication in subject areas (i.e., sciences with sciences; business with business) or across different subject areas (i.e., business with sport; science with sport; economics with psychology). One way to support collaborative practices would be through the facilitation of multimedia (e.g., Skype, YouTube, Twitter, Facebook groups, and blogs) opportunities between the UK and Indian teacher-practitioners. Indeed, evidence exists of how online technology provides opportunities to engage with best practices (McLeod & Richardson, 2013). For instance, Twitter, albeit not primarily an academic networking service has been taken into account due to its networking features which is also becoming increasingly popular for academics and students. Discussion centres on the benefits of these services to both seasoned and early career researchers (Relojo & Pilao, 2016). This engagement would foster many opportunities that would enable practitioners to work alongside each other without the need to actually travel overseas. For example, the 'Cloud Nanny' introduced in the UK and Bhutan's national educational policy encourages EI training for teachers and students. These projects are practical applications of how EI training is gaining roots in the educational system.

An overall synopsis reveals that the following should be considered at all levels. First, EI should form part of teacher training packages and awareness of its utility should be raised. Second, there should be greater use of resources to develop best practices through collaboration. Third, a process of understanding EI more effectively would be established through a qualitative research methodology. Finally, staff development opportunities should not be missed to facilitate best practices.

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Impact of the human behaviour map psychotherapeutic model in depressive disorder

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The present study used quantitative methods with pretest and post-test in order to assess the efficacy of human behaviour map (HBM) psychotherapeutic model in the treatment of. For the development of this research and taking into account the goals initially set, a convenience sample of 85 adults from various districts in Portugal were recruited. It was revealed that 83.4% of the participants found the therapeutic intervention effective after five and ten sessions. There is a statistically significant difference t (84) = 18.07, p < 0 .001) between the mean degree of depression pretest and post-test concluding thereby that the HBM psychotherapeutic intervention had a significant impact in reducing the degree of patients' depression. The complete remission of depressive is verified on 80% of the sample. Lastly, it was also observed that the HBM intervention is highly efficient and effective in treating depression, having a statistically significant efficacy (M = 13.87; X^2 = 0.005), especially in those cases where the initial depression index is more severe before treatment.

Keywords: depression, depressive disorder, human behaviour model, psychotherapy, treatment

BACKGROUND

In industrialised countries, depression is considered to be one of the most serious public health problems, and it has been classified as the 'disease of the century' by the World Health Organization (Relojo, 2017a). This finding is corroborated by several studies (e.g., Bento, Carreira, & Heitor, 2001; Caldas de Almeida & Xavier (2013); Schotte, Bossche, Doncker, Claes, & Cosyns, 2006). There is, therefore, a need to intervene effectively and efficiently in order to fight this blight. This study aims to evaluate the impact of human behaviour map (HBM) psychotherapeutic intervention in the treatment of depression. Depression causes extremely complex psychological suffering, with well-known impacts on human functioning (Araújo, Coutinho, & Pereira, 2008), interfering in all aspects of daily life, be it professional, social, personal, or economic (Mehta, Mittal, & Swani, 2014).

On a general level, depression is seen as a common mental disorder characterised by sadness, loss of interest, tiredness, lack of concentration, absence of pleasure, mood swings between feelings of guilt and low self-esteem, in addition to sleep disorders (Beck & Alford, 2009). However, the symptoms of depression are multifaceted and vary from person to person (Schotte et al., 2005).

Moreover, it was argued that all the relevance of the delicate and a serious problem that haunts the community with some sort of mental disease, seem to be pushed away from politics and professional groups in a country, small both in size and mentality. Moreover, much was already discussed about this Portuguese characteristic of looking only to 'one's yard' and alienating themselves from the greater good, respect or common interest, no matter the area (great writers took this state of being as a central question in masterworks of Portuguese literature), reality maintains itself. And in reality, mental health, for being at the present moment remains a very little discussed subject both in media and society; it is still taboo and stigmatised. However, it is suggested that a European master's degree could be a valuable complement to national training and qualification structures (Pinto-Coelho, 2017).

Given its severity and the impact that it has on public health, many authors have written about the subject of depression and there is a wide diversity of views on its origin and causes. Therefore, this study addresses the research problem: 'What is the effectiveness and efficiency of the HBM psychotherapeutic intervention model in the treatment of depression?' by using qualitative research methods.

The HBM psychotherapeutic model enables an individual to resolve internal and external emotional conflicts, with the aim of modifying the negative emotional state they find themselves in, helping them achieve the desired psychological and emotional balance (Brás, 2010). To this end, two psychotherapeutic techniques are used: Athenese and Morfese which enable the emotional system of the individual to be shaped, allowing them to release emotions such as distress, fear, sadness, among others, and enabling their depressive or anxious state to be altered.

Athenese, which is made of of a set of psychotherapeutic exercises, consists of using conscious thought as a method of redefinition, helping the individual articulate new strategies for thinking about and understanding reality (Brás, 2010). Morfese is an emotional release technique where a dream is induced, guided by a psychotherapist, during which the participant reaches an intermediate state between sleep and wakefulness. This technique allows the individual to dissociate from past experiences that have troubled them to associate themselves with positive emotions (Brás, 2010). When combined, the techniques lead to an effective change of state, with a clear alteration of the mental representations that previously disturbed the individual.

METHOD

This study use pretest and post-test quantitative research methods designed to answer the research question: 'What is the effectiveness and efficiency of the HBM psychotherapeutic intervention model of depression?', with the aim of assessing the impact of HBM intervention on depression.

Measures

A questionnaire made up of two parts was used during this study. The first part related to the sociodemograhphic data of the individual and the second part to the Beck Depression Inventory (BDI), which is the most widely used and accepted self-assessment depression method in both research and clinical practice (Beck & Steer, 1984; Beck, Steer, & Brown, 1996; Dunn, Sham, & Hand, 1993). It is a self-assessment tool consisting of a Likert scale with 21 items referring to symptoms and cognitive attitudes. Each item is assessed on a scale of 0 (no symptoms) to 3 (severe symptoms), according to how they feel during the last week, with a final score obtained from the sum of all items (the score can range between 0 and 63 points).

The Centre for Cognitive Therapy (Beck, Brown, Steer, Eidelson, & Riskind (1987) recommends the following score for sample of participants with emotional disorders: (i) 0–9: not depressed; (ii) 10–18: mild depression; (iii) 19–29: moderate depression; and, (iv) > 30: severe depression.

In the original studies, the BDI showed good internal consistency (α = .81), moderate to high test-retest reliability (from .60 to .90) and good criterion validity based on the differentiation between clinical and non-clinical populations. In this study the internal consistency was α = .89

Selection criteria

During the development of this research project, and taking into account the objectives defined at the outset, a convenience sample group consisting of 85 participants were assessed, adults of both genders, diagnosed with depressive symptoms, from various parts of Portugal, of which 64.7% were female (n = 55) and 35.3% were male (n = 30), aged between 18 and 69 (M = 41.2; SD = 12.99).

In this study, the post-tests were given to 83.4% of the sample group between the 5th and 10th psychotherapeutic intervention sessions, when the therapeutic objectives were outlined and diagnosis consultation.

Procedure

An initial evaluation and diagnosis session was held by the psychotherapists at Clinica da Mente, which resulted in an analysis of the clinical cases, identifying the causes of the psychological and emotional disorders of each patient, and outlining an appropriate therapeutic plan for each one.

At the start of the first treatment session, and before any therapeutic intervention, the patients were asked about their availability to participate in the study. They were also informed of the nature of the study, its objectives and methodology, ensuring all ethical and deontological principles, as well as its anonymity and confidentiality. Subsequently, a questionnaire including questions on sociodemograhphic data and the BDI (pretest) was administered to all the participants.

Intensive HBM therapeutic sessions, with duration of up to two hours, were held weekly, according to the plan outlined in the evaluation session and until the objectives defined at the outset were reached. It is important to note that the duration of the intensive treatment varies and depends on individual needs

and therapeutic goals. In the final treatment session of the intensive phases, the questionnaire was again administered to the patients (post-test).

It is recommended that sessions are conducted to maintain and consolidate the achieved emotional balance over the course of one year, following the intensive treatment sessions (Brás, 2010).

RESULTS

The data was analysed using SPSS and XLSTAT. Its treatment occurred in two phases. Initially, descriptive statistical techniques were used (frequencies, percentages, medians, averages, and standard deviations) as well as statistical inference analyses of the hypothesis, using the chi-squared independence test (X^2) with a type I error probability of 0.05.
In the second phase, the psychometric characteristics of the BDI were analysed: the internal consistency of the inventory was studies by calculating the result accuracy coefficient (Cronbach's alpha) as well as the correlation of each item with the total inventory. Thus, in order to provide an answer to the hypothesis being studied: 'What is the effectiveness and efficiency of the HBM psychotherapeutic intervention model in the treatment of depression?' the researchers analysed whether there was a decrease in the depression index of the patients composing the study's sample group (see Table 1).

Table 1
Depression Scores by Category in the Pre- and Post-test Samples

	Pretest				Post-test			
Categories	*f*	%	*M*	*SD*	*f*	%	*M*	*SD*
Not depressed	3	3.5	6.3	1.53	68	80	3.5	2.43
Mild depression	12	14.2	14.0	2.73	16	18.8	12.1	2.78
Moderate depression	32	37.6	24.3	3.36	1	1.2	20	0
Severe depression	38	44.7	37.9	7.38	0	0	0	0
Total	85	100	28.3	11.12	85	100	5.3	4.49

$p < 0.001$

At the beginning of the study (i.e., prior to psychotherapeutic intervention), the sample's average index was 28.3, which corresponds to the upper limit of 'moderate depression' category. While at the end of the psychotherapeutic intervention using the HBM model, the mean depression index of the sample was 3.5, corresponding to 'not depressed' category. We can therefore establish that there is a statistically significant difference, t (84) = 18.07, $p < 0.001$), between the pre- and post-test average degree of depression, and that the psychotherapeutic intervention using the HBM model had a significant impact on reducing the degree of depression in all patients.

In order to make the aforementioned differences in the level of depression more evident (i.e., to show whether there are statistically significant difference between pretest and post-test), we analysed the evolution of pretest and post-test levels of depression in the sample group, categorising their answers on the BDI as 'not depressed' (a score of up to 9 points on the scale); 'mild depression' (a score of between 10 and 18 points; 'moderate depression' (a score of between 19 and 29); and, 'severe depression' (a score of over 30 points in the scale.

In this manner, it was found that before the psychotherapeutic intervention 44.7% of the sample exhibited 'severe depression' indexes (M = 37.9, SD = 7.38) and 37.6% 'moderate depression (M = 24.3,

SD = 3.36). After psychotherapeutic intervention using the HBM model, 80% of the sample (*n* = 68) were 'not depressed' (*M* = 3.5, *SD* = 2.43) and 18.8% exhibited 'mild depression' indexes (*M* = 12.1, *SD* = 2.78)

On the scatterplot (Figure 1) and the boxplot (Figure 2), we can also assess the causal relationship between the use of the HBM intervention model and the remission of depressive symptoms in 80% of the sample and the almost total decrease of the depression index in the rest of the sample group.

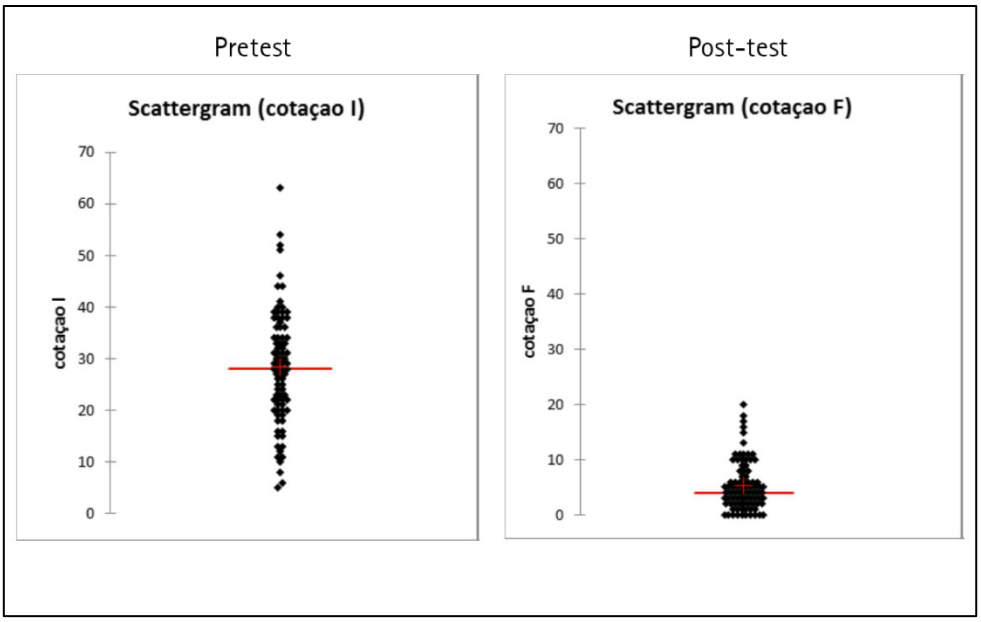

Figure 1. Scatterplot of pretest and post-test.

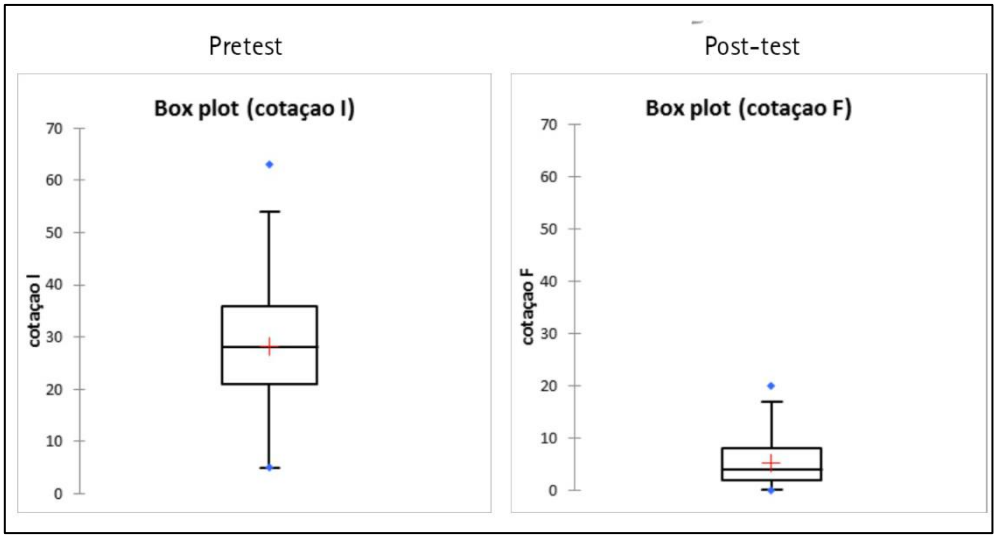

Figure 2. Boxplot for pretest and post-test represented by the Whisker segment.

Inferential analysis of the level of depression in relation to gender

In order to verify the impact of the sociodemograhphic variable on the variation of the degree of depression after psychotherapeutic intervention using the HBM model, a statistical inference analysis was carried out using the chi-squared distribution test (X^2) for a type I error probability of 0.05. When looking at the number of cases with higher levels of variation (i.e., participants who were initially suffering from 'severe depression' and after the intervention were 'not depressed'), it was established that in all cases where women began psychotherapy with 'severe depression', the psychotherapeutic intervention using the HBM model had a larger impact compared to men who had also began the intervention with 'severe depression', where it is inferred that the HBM intervention model is highly effective and efficient in the treatment of depression, with a statistically significant effectiveness (M = 13.87; X^2 = 0.0005), especially cases where the initial degree of depression before the treatment is more severe, and where gender is also a relevant factor in treatment, with women experiencing a more accentuated reduction in the depression index.

CONCLUSION

There is a statistically significant difference between the pretest and post-test degree of depression, and it can be inferred that psychotherapeutic intervention using the HBM model had a significant impact in reducing the degree of depression in patients, where complete symptom remission was observed in 80% of the sample group.

For 83.4% of the sample group, between five and ten therapeutic intervention sessions were needed for them to overcome their previous depressive state, perceived through quality of life and well-being.

Schestatsky and Fleck (1999) carried out a study in order to test the effectiveness of a cognitive behavioural psychotherapeutic treatment in participants in the acute phase of depression. The results revealed an effectiveness rate of 55.3% in reducing depressive symptoms, where 20 session of cognitive behavioural therapy were needed for the participants to overcome their depressive state (i.e., for them to transition from a severe depressive state). A study (Hayes, Beevers, Feldman, Laurenceau, & Pearlman, 2005) was conducted with 29 patients diagnosed with depression, using a differentiated psychotherapy intervention method called the 'Depression Treatment and Wellness Promotion Programme', made up of 24 sessions. The results pointed to a 50% decrease in the symptoms of depression. Costa, Antonio, Soares, & Moreno (2006) describe a controlled trial involving 62 participants with symptoms of depression treated with combined psychodramatic psychotherapy (with the use of drugs) and pharmacological therapy. The psychodramatic therapy was delivered for 4 individual sessions and 24 group therapy sessions. The pharmacological therapy was submitted exclusively to pharmacotherapy. An analysis of the results showed that 20% of patients in the psychodramatic psychotherapy experienced complete remission and 31.62% experienced a reduction in symptoms of depression. No patients in the pharmacological therapy entered into remission, 14.33% experienced decreased symptoms of depression and 30% experienced a worsening of their symptoms of depression.

In the present study, it was noted that in all cases in which women began psychotherapy with 'severe depression', the psychotherapeutic intervention using the HBM model had a greater impact than in men who also began the intervention with a level of 'severe depression'.

We can, therefore, conclude that the HBM intervention model is highly effective and efficient in the treatment of depression, with a significant statistical effectiveness, especially in those cases where the initial depression index is more serious. The conclusion arising from the present study is of particular importance to the construction of a new mental health paradigm, emphasising the relevance of the HBM approach in the treatment of the blight that is depression.

This study contributed to the theoretical and practical body of knowledge on mental health. For instance it will also address the issue of 'psychiatric hegemony' whereby the idea that ruling class values and norms have become naturalised within the scientific research and knowledge-production on mental illness. Over the past 35 years, this process of expert claims-making by mental health professionals has expanded and become a dominant frame of reference which we now use to speak of and understand ourselves and others. It is argued that our behaviour, personalities, and lifestyles are now closely observed and judged under a psychiatric discourse which has become totalising, thus it can be said to have reached 'hegemonic' status (Relojo, 2017b)

In essence, the HBM approach to the treatment of depression should, therefore, be widely disseminated and used by professionals in the field of psychology and, as such, should be taught to psychologists during their initial academic training and/or in continuous training, so that they can diversity and optimise the intervention strategies employed.

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Blog psychology: Insights, benefits, and research agenda on blogs as a dynamic medium to promote the discipline of psychology and allied fields

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It is generally recognised that blogging started in 1994, with Links.net considered to be the first ever blog. Since then blogs on a variety of topics and disciplines have emerged. Undeniably, blogs have been a functional vehicle in promoting psychology and have been instrumental in promoting mental health. Psychology and mental health blogs offer a wealth of information, insight, and interesting content for their audience. The range, immediacy, and diversity of bloggers' voices are highly compelling; readers are often drawn to blogs for their speed and intimacy. In light of this, the present paper outlines how blogs can serve as a transformative medium to promote the discipline of psychology and allied fields. It also provides a brief account of psychology blogs and provides an overview of popular blogs in the discipline. A new field could potentially materialise in the discipline and this can be known as 'blog psychology': a sub-branch of the discipline that attempts to apply psychological principles and research in order to optimise the benefits that readers can derive from consuming blogs. Potential theories of blog psychology may incorporate the readers' perception, cognition, and humanistic components in regards to their experience to consuming blogs. It could also explore a range of psychological principles involved in running blogs.

Keywords: blog psychology, cyberpsychology, internet, mental health, psychology

BACKGROUND

It is estimated that in January 2017 there were more than 1.8 billion websites (Fowler, 2017). A website can be a personal, commercial, governmental website, or a non-profit organisation website. Websites are typically dedicated to a particular topic or purpose, ranging from entertainment and social networking to providing news and education.

Blogs are another form of website. As defined by the Australian Psychological Society (n.d.), these are 'shared online websites written in the form of journals by individuals, groups or corporations about any topic or issue they want.' Essentially, running a blog is democratic: anyone can start their own.

With the number of available websites, blogs have now become ubiquitous: there are blogs in every conceivable topics, disciplines, and niche. It is generally recognised that blogging started in 1994, with Links.net considered to be the first ever blog (Shevked & Dakovski, 2006). Blogging has gone a long way from being interactive, online forms of the traditional personal diary (Boniel-Nissim & Barak 2013) to becoming repository of valuable information.

The phenomenon and practice of blogging offers a rich environment from which to look at the psychology of the internet. By using blogging as a lens, researchers can see that many predictions and findings of early internet research on social and psychological features of computer-mediated communication have held true, whereas others are not as true, and that the psychology of the internet is very much a sense of the one and the many, the individual and the collective, the personal and the political. Blogs illustrate the fusion of key elements of human desire: to express one's identity, create community, structure one's past, and present experiences – with the main technological features of 21st century digital communication. Blogs can serve as a lens to observe the way in which people currently use digital technologies and, in return, transform some of the traditional cultural norms – such as those between the public and the private (Gurak & Antonijevic, 2008).

To date, blogging has become a dynamic and transformative medium in promoting the discipline of psychology and allied fields. But more importantly, blogging helps people in improving their mental health and well-being. For instance, Boniel-Nissim and Barak (2013) explained that research shows that writing a personal diary is a valuable therapeutic means for relieving emotional distress and promoting well-being, and that diary writing during adolescence helps in coping with developmental challenges. Current technologies and cultural trends make it possible and normative to publish personal diaries on the internet through blogs. They examined the therapeutic value of blogging for adolescents who experience social–emotional difficulties. The field experiment included randomly assigned adolescents, pre-assessed as having social–emotional difficulties, to 6 groups (26–28 participants in each): Four groups were assigned to blogging (writing about their difficulties or free writing; either open or closed to responses), a group assigned to writing a diary on personal computers, and a no-treatment control group. Participants in the 5 writing groups were instructed to post messages at least twice a week over 10 weeks. Outcome measures included scales of social–emotional difficulties and self-esteem, a social activities checklist, and textual analyses of participants' posts. Measurement took place at pre- and post-intervention and at follow-up 2 months later. Results showed that participants maintaining a blog significantly improved on all measures. Participants writing about their difficulties in blogs open to responses gained the most. These results were consistent in the follow-up evaluation.

Popular psychology blogs

Essentially, psychology blogs can be grouped into two: academic and general. Academic psychology blogs (APBs) are those aimed for researchers and academics. The contents of APBs are sourced from latest research published in scholarly journals. On the other hand, general psychology blogs (GPBs) are

those run by authors who may not have a formal qualification in psychology. It is often considered that GPBs often publish 'pop psychology' contents.

These are the popular APBs:

1. *Advances in the History of Psychology (AHP)* notifies readers of resources, publications, conferences, and other events or issues of interest to researchers and students of the history of psychology.
2. *APA Psych Learning Curve* is a place where educators, students, parents, activists, and psychologists can explore the latest in psychology education and education in psychology.
3. *BPS Research Digest* is published by the British Psychological Society since 2005. Its aim is to showcase psychological science while also casting a critical eye over its methods.
4. *Brain Blog* is written by a neuropsychologist, this blog focuses on topics such as memory, aging, and the way we give directions.
5. *ISCHP Blog* is managed by the International Society of Critical Health Psychology. One of its aims is to promote active commitment to equity, transparency and inclusion in the way we run the society and its events and projects.
6. *NUIG Health Psychology Blog* is from the School of Psychology of the National University of Ireland, Galway is a central hub of research in this area, with strong links to the Divisions of Health Psychology in both the Psychological Society of Ireland (PSI) and the British Psychological Society (BPS).
7. *OU Psychology Blog* is run by School of Psychology of the Open University. It covers forensic psychology, counselling, and social psychology.
8. *Psychology and Psychologist* publishes news about psychology and psychologists, including commentary and archival articles published in *The New York Times*.
9. *Psychology / Psychiatry News* is published by Medical News Today and it features the latest psychology and psychiatry research from prestigious universities and journals throughout the world.
10. *UCL Experimental Psychology Blog* is run by UCL's Psychology and Language Sciences (PALS). They undertake world-leading research and teaching in mind, behaviour, and language. It brings together researchers in a range of disciplines such as cognition, neuroscience, linguistics, education, communication, medicine, health, phonetics and development.

These are the popular GPBs:

1. *Brain Blogger* essentially challenged the traditional biomedical model and its associated web reporting by appointing Dr Engel's influential biopsychosocial model as a guiding principle.
2. *Mind Hacks* gives Neuroscience and psychology tricks to find out what's going on inside your brain.
3. *PsyBlog* is another popular GPB which is founded by the British psychologist Dr Jeremy Dean
4. *Psych Central* claims to be the largest and oldest independent mental health social network. Since 1995, its award-winning website has been run by mental health professionals offering reliable, trusted information and over 250 support groups to consumers.
5. *Psychology Fashion* is managed by Professor Carolyn Mair, a freelance consultant to industry and education. A Chartered Fellow of the British Psychological Society, Carolyn's work is concerned with using fashion and clothing as a vehicle for making a positive difference.
6. *Psychology Today* was first launched in 1967 and continues to thrive. On this site, they have gathered a group of renowned psychologists, academics, psychiatrists and writers to contribute their thoughts and ideas on what makes us tick.

7. *Psychreg* is the blog on psychology, mental health, and well-being. Launched in 2014 as a directory, it soon evolved into publishing articles on psychology and mental health, hosting a podcast, and having its own open access publication.
8. *Tutor2u Psychology Blog* partners with teachers and schools to help students maximise their performance in important exams and fulfil their potential. Their blog covers a wide range of topics.
9. *What is Psychology (WIP)* was created in order to bring a simple, fun and at times whimsical approach to the world of Psychology. WIP looks at psychology and psychological applications in everyday life,
10. *Welldoing* is a site devoted to mental health, self-development and wellbeing, with its own directory of therapists and counsellors.

Benefits of blogging

One study (Lee, 2017) explores how the application of blog assignments facilitated the L2 writing process and how blogging affects the way students view blog-based L2 writing instruction and peer feedback. The results showed that beginning students had a positive attitude toward the use of blogs because it gave them agency over their learning, and engaged them in co-construction of knowledge with their peers. While scaffolding through peer feedback affected students' self-regulated efforts to make improvement on written content and increase language accuracy, strategies for effective use of feedback from the instructor was important. This study concludes that blogging not only empowers students to be creative with the content, but also promotes attention to language forms. L2 educators are strongly encouraged to take full advantage of the widely available blog technology by incorporating it into their teaching methods to further promote critical reflection and collaborative interaction within socially bounded online learning environments.

In June 2015, the American Historical Association (AHA) published its guidelines for evaluating digital scholarship, capping off a year-and-a-half of research into the emerging field of digital history. Blogging sat at the centre of the AHA's discussions, as scholars considered its relationship to digital history and its potential as an emerging form of scholarship in the digital era. McGregor (2017) summarised those debates and outlines the development of group blogs within academic history. Reflecting on his own work as the founder of the *Sport in American History* group blog, McGregor showed how it, like other blogs, is a form of new scholarship that helps rethink traditional methods of publication and scholarly communication. This new form of scholarship is less formal and more democratic, as well as geared for public consumption. McGregor further suggest that, within sport history, *Sport in American History* has fostered a more cohesive and collaborative community, bringing together an often-splintered subfield.

On another aspect, the learning process, as argued by Morris (2017) involves contextualising new knowledge with prior experiences and beliefs. In the scientific discipline, the focus of learning is geared towards learning how to do science, but there are significant barriers to learning, including jargonised terminology and excessive use of acronyms. Scientific discoveries are made by experimentation, but science as a discipline progresses through a series of ongoing conversations. Blogging provides a platform that widens access to these conversations by communicating science in a style of writing that sits somewhere in between the formal and informal. Regenerating scientific writing as a blog can enhance student learning by breaking down the barriers to learning posed by 'intellectually inaccessible' information. Morris described an experimental approach to teaching cancer biology by regenerating a classic review article in the field as a series of blog pieces, using everyday metaphors and analogies to describe the characteristics and behaviour of cancer cells. Other aspects of discipline, identity, 'voice' and communities of practice are also considered. Until such time as blogging is recognised as a valid academic output, however, it will remain firmly somewhere in between.

In recent years, the common and mundane dying has begun to take place in the public space of the internet. Among the blogs about food, fashion, travel, and other joyful aspects of life, blogs about severe disease and dying have appeared. The aim of one article (Andersson, 2017) is to describe some characteristic features of a sample of cancer blogs and to discuss them in the light of Zygmunt Bauman's theory of the rationalisation of death in modernity and theories about networked media, especially the theories about 'affective labour' and 'ambient intimacy' by McCosker and Darcy (2013), and Pfister (2014). It will then be argued that an affective communication is performed in and through these cancer blogs, where not only language but also the deficiencies of language – and what is called *shared ineffability* – might be valuable and meaningful (although not unproblematic) as part of a late modern approach to death, and in the practicing of the art of dying

DISCUSSION AND CONCLUSION

Recently, there has been a dramatic proliferation in the number of blogs; however, little is published about what motivates people to participate in blog activities. Based on the theory of reasoned action, researchers developed a model involving technology acceptance, knowledge sharing and social influences. A survey of 212 blog participants found strong support for the model. The results indicated that ease of use and enjoyment, and knowledge sharing (altruism and reputation) were positively related to attitude toward blogging, and accounted for 78% of the variance. On the other hand, social factors (community identification) and attitude toward blogging significantly influenced a blog participant's intention to continue to use blogs. Together they explain 83% of the variance of intention to blog (Hsu & Lin, 2008).

With the continued popularity of blogs, it is important that a specialised discipline be developed to encompass all forms of internet-mediated communication, specifically in blogs, such as the use, design, and its impact on mental health and well-being of its readers.

Potential theories of blog psychology may include the readers' perception, cognition, and humanistic components in regards to their experience to consuming blogs. Blog psychologists may also draw upon developmental and narrative psychologies and emerging findings from cyberpsychology. The theories and research in psychology could be used as the backbone of blog psychology and guide the discipline itself.

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The theoretical and methodological problems in the usage of police personality measurement to predict job performance

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The recruitment and assignment procedure of police officers involve the measurement of personality through designated inventories. Despite more than a century of experience and developments, the research and practice on police personality measurement still suffer from three major problems – lack of sound theoretical framework, lack of congruency between the definition of personality traits and police tasks, and poor measurement tools. In this paper, based on the historical development of police personality measurement practices, these three problems and possible solutions are discussed through classical and modern theories in personality psychology. Policy recommendations and directions for future research are presented to remedy these problems.

Keywords: congruency, job analysis, job performance, police personality, specific aptitudes

BACKGROUND

Police officers have a wide range of duties such as collecting evidence, interviewing suspects, victims, and witnesses, preparing investigation reports, and accomplishing other judicial and administrative tasks. In addition, they have to deal with various types of crimes including property crimes, violent crimes, organised crimes, terror crimes, financial crimes, etc. (Ono, Sachau, Deal, Englert, & Taylor, 2011). Each of these tasks might necessitate specific skills, and assigning the suitable officer in each task has a vital role in the success of a police department. If the police organisations can appropriately identify the staff who will be employed in specific tasks, the labour costs and administrative problems can be reduced, and the number of promotable workers and the quality of the service can be increased (Tomini, 1997).

Police personality assessment has been used to examine the relationship between the individual differences among police officers and their job performance in different formats such as performing evaluations in the recruitment process, 'fitness-for-duty' evaluations, and for the mental support to the officers who have psychological troubles (Weiss & Inwald, 2010, p. 5). Research has shown that personality traits and job performance of police officers are significantly related with each other and the job performance of police officers is influenced by their personal dispositions (e.g., Forero, Gallardo-Pujol, Maydeu-Olivares, & Andrés-Pueyo, 2009; Goldberg, 1993; Tomini 1997). Despite this relationship, the measurement tools that were created to predict the job performance of police officers have not provided satisfactory results (Aamodt, 2010; Murphy & Dzieweczynski, 2005).

In this paper, the shortcomings of the current usage of police personality assessment tests in the prediction of police performance will be discussed. Furthermore, the possible ways of developing more useful tools and personality measurements in this particular area will be argued in the light of classical and contemporary theories in personality psychology. In the first section, the use of police personality assessment in police departments will be presented from a historical perspective. In the subsequent three sections, three major problems in the current applications of police personality measurement – the lack of a sound theoretical framework, the need for matching personality characteristics to certain tasks, and the need for effective measures – will be discussed from a policing perspective. Finally, the findings that will be derived from these theoretical and methodological discussions, possible policy implications, and directions for future research will be demonstrated.

Police personality and performance: From a historical perspective

The use of assessment tests in the prediction of police performance dates back to the early 20th century. Assessment tests used in the early 20th century to predict police personality aimed primarily to evaluate either the intelligence level or the mental health of the officers before recruiting them in the police departments (Weiss & Inwald, 2010). For instance, Terman (1917) used the Stanford-Binet scale, which is one of the earliest intelligence scales, to predict the future performance of police officers. In the later decades, two types of inventories have been used in testing police personality: psychopathology tests (e.g., Minnesota Multiphasic Personality Inventory [MMPI]) and normal personality tests (e.g., Five Factor Model [FFM]) (Aamodt, 2010). Built on these two types of tests, specified inventories for police officers were created in late 20th century. The first personality inventory that was specifically designed to be employed for the selection of public safety officers was created by Robin Inwald in 1979 (Inwald Personality Inventory-IPI) and it involves 25 personality scales (Weiss & Inwald, 2010). Most of the scales of the IPI are related to socially deviant attitudes such as alcohol abuse and family conflicts, and in that sense, the inventory aims primarily to eliminate unsuitable candidates rather than selecting those who are more likely to excel in policing (Sanders, 2008). In fact, the studies that examine the predictive validity of IPI found that the inventory is successful in predicting negative or problematic behaviours such as incidences of absence and disciplinary issues among public safety officers (Sanders, 2008; Shusman, Inwald, & Landa, 1984).

Despite the worldwide use of these methods, each of them has some shortcomings in their applicability to the assessment of police personality and its impact on job performance. First of all, psychopathology tests such as MMPI were not originally designed to select applicants for specific jobs, but to examine if the applicants have some psychological problems that might lead to poor performance or discipline-related issues (Sanders, 2008). Psychologists criticised the use of psychopathology tests as a police personality assessment tool as it was originally developed to diagnose psychopathy, and no evidence has been found to consider the MMPI as a valid predictor of police performance (Mills & Stratton, 1982). Meta-analyses of previous studies indeed showed that tests of psychopathology are not very helpful at predicting job performance of police officers (Aamodt, 2010; Murphy & Dzieweczynski, 2005).

In the 1980s, police personality assessment inventories started to focus more on the personality factors than on psychopathology (Weiss & Inwald, 2010). Following the trend in most of other professions, normal personality tests, which are used to measure the personality traits of ordinary people in daily life, started to be used more often in police personality assessment in the last few decades (Aamodt, 2010). Five Factor Model, which was created by McCrae and John (1992), is one of the most prominent personality tests and classifies personality traits into five major groups as: Extraversion, Agreeableness, Conscientiousness, Neuroticism, and Openness to Experience. Based on the model, several observations and studies across the world have been conducted, and these studies have indicated that the model is comprehensive and applicable (McCrae & John, 1992). The model provides a common framework for researchers to study and summarise the personal characteristics of people in the five basic dimensions which are mentioned above. Nevertheless, the overall success of the normal personality tests in predicting job performance is not so different from that of psychopathology tests (Murphy & Dzieweczynski, 2005), although certain scales of the former were found to be significantly correlated with the success in certain tasks or skills (Aamodt, 2010). For instance, openness to experience predicts academic performance, measures of emotional stability predict disciplinary problems, and measures of conscientiousness predict supervisory ratings of performance. Despite these local findings, the validity and utility of current personality measures are still being questioned (Murphy & Dzieweczynski, 2005).
After reviewing the studies between 1952 and 1963 that examined the relationship between personality and job performance, Guion and Gottier (1965) suggested that 'it is difficult...to advocate, with a clear conscience, the use of personality measures in most situations as a basis for making employment decisions about people' (p. 160). Their major concerns were the shortcomings of the personality theories specifically in the measurement of traits and the lack of consistency and strength of the studies that examine the relations between personality characteristics and the behaviours at work. This conclusion discouraged the personality psychologists who are interested in job performance until the 1990s when more research started to show the relevance between the two concepts (Murphy & Dzieweczynski, 2005). This trend affected also the studies on police personality assessment.

Murphy and Dzieweczynski (2005) identified three problems regarding the current usage of personality inventories in personnel selection. First, they echo Guion and Gottier's (1965) criticism of personality theories in terms of being vague and unconvincing in predicting job performance. Second, they argued that the current practices fall short in matching personality constructs and certain jobs. That is to say, the specific relationship between certain characteristics and the performance in the job being studied has not been explained clearly. Third, they suggested that the measures of personality that are related to the jobs being analysed are poorly defined. The personality measures that have been dominantly used in workplaces such as the Minnesota Multiphasic Personality Inventory (MMPI), the Myers–Briggs Type Inventory (MBTI), the California Personality Inventory (CPI), the Guilford–Zimmerman Temperament Survey (GZTS) and the Sixteen Personality Factor Questionnaire (16PF) are not proven to be related to the organisational criteria related to the jobs being studied (Murphy & Dzieweczynski, 2005).
The critique of Murphy and Dzieweczynski (2005) is not specifically related to a certain type of job but draws the general problem of the application of personality psychology in the prediction of job

performance. Considering the historical development reviewed in this section, the situation in the police organisations and the research on police personality-performance relationship is not an exception. In the consequent sections, the three problems raised by Murphy and Dzieweczynski (2005) regarding the shortcomings of current efforts to relate personality with work performance will be addressed from a specific perspective that connects the literature on police personality and its impact on policing performance.

Theoretical gap

The relationship between personality characteristics and job performance needs to be explained in a way that can help us to identify the right law enforcement officers for suitable positions. Research on personality-performance relations has provided the empirical evidence which shows a link between them. However, theoretical frameworks about this link have not brought clear explanations about which personality dimensions predict performance in what kind of jobs or specific tasks in a job (Hogan & Holland, 2003; Murphy & Dzieweczynski, 2005). Personality-performance relations are complex and vary across different jobs, cultures, settings, and organisations, thus, theoretical explanations on these links should consider the variety and the contextual differences in workplaces and jobs. The efforts to create a theoretical framework should be focused on the relationship between the success of professionals and the related aptitudes to excel in specific tasks of their jobs. Differential aptitude theory suggests that the success in a certain job and the capacity to acquire the training related to that job can be predicted by incorporating measures of several specific aptitudes (Schmidt & Hunter, 2004). Based on this theory, aptitude inventories measuring quantitative, verbal, or spatial skills can be designed to understand the necessary abilities to accomplish the tasks in the job being studied, and these tests can be used to predict the success in that job (Brown, Le, & Schmidt, 2006).

The idea of measuring personality is based on the uniqueness of human characteristics which can be observed both in the progress and the product of individuation – the process of becoming an individual (Allport, 1955). A successful observation of human behaviour through valid measurements can help us to identify the unique characteristics of individuals and discover the differences among them. Allport (1927) considers personality, which he describes as the totality of mental life and behaviour, as 'the most unique thing about the human organism' (p. 6). In parallel with Allport's depiction, Alfred Adler's concept of 'individuality' also expresses the uniqueness and indivisibility of the human being, and according to Adler, this unity can be seen in every expression of personality such as thinking, feeling, and acting (Ansbacher, 1971). One of the axioms of Adler's individual psychology is the principle of unity which assumes that 'a human being is one and indivisible both in regard to the mind-body relationship and to the various activities and functions of the mind' (Ellenberger, 1981, p. 609).

To explain the uniqueness of human personality, Allport (1955) draws an analogy by suggesting that each person is an idiom which develops in its own context and this context should be understood in order to apprehend the nature of the person through a comparison with the other people. To accomplish the valid comparison among individuals and identify the right person for a job, the aptitudes related to the job being analysed and particular tasks of that job should be determined by examining the context of the job and the workplace. Graham (1998) gives some examples of aptitudes related to certain jobs such as higher numeric ability for engineers, higher clerical ability for secretaries, and higher manual dexterity for tire inspectors. Furthermore, Graham (1998) examines the relationship between specific aptitudes and job performance through the term 'congruence' which was defined by Gati (1989) as 'the size of the gap between the profile of an individual's characteristics and that of his/her occupation or job' (p. 182). The narrower the gap, the more congruent a person for a job or specific task in a job, because each professional occupation necessitates specialised ability patterns.
According to Gottfredson's (1986) Occupational Aptitude Patterns (OAP) theory, aptitudes form patterns, and these patterns are related to the requirements of specific jobs. She reached this result by

categorising 460 jobs into 13 job clusters and applying the General Aptitude Test Battery (GATB) scale, which is one of the most popular tools used to identify specific aptitudes that are required to select the appropriate personnel out of the job market in the United States (US Department of Labor, 1970), for each cluster. As a result, Gottfredson (1986) found that the aptitudes that predict success in specific jobs cluster and create patterns that differentiate some jobs from others. Gottfredson (1986) suggested that when the general cognitive ability is held constant, job performance can be better predicted through the possession of particular aptitudes, and measuring these aptitudes might help to distinguish the people who have required abilities for a job.

By using Gottfredson's (1986) OAP theory, Graham (1998) identified aptitude scores for the highest job performance for each cluster of jobs and used these scores to predict job performance in comparison to general mental ability – the measurement that shows the level of an individual to understand instructions, solve problems, and learn (Schmidt & Hunter, 2004). As a result, she found that specific aptitude information does not add a substantial amount of predictive validity when it was taken into account with general mental ability. Instead, the latter was found to be the main predictor of success in different clusters of jobs. This finding might be a result of a limitation of the study which is the usage of job groups as a whole to analyse the relationship between the aptitude scores and job performance. The problem here might be that Graham (1998) used Gottfredson's (1986) Occupational Aptitude Patterns map as a guide for grouping various jobs into clusters and analysed the impact of aptitudes on the clusters as a whole.

The professional tasks today are increasingly specialised and even the subfields in a profession necessitate distinct personality traits and skills to accomplish the work. Therefore, Graham's (1998) findings about the limited impact of aptitudes on performance might be challenged if specified aptitude measures can be created and applied for each job or task separately instead of considering the job clusters as unique. In fact, Hogan (2005) states that personality traits and cognitive ability have almost the same power in predicting job performance. Moreover, Goldberg (1993) suggests, even 'intellectually able individuals falter on the job when their personality traits are not congruent with task requirements' (p. 32). Therefore, the theoretical framework that will help us to better understand the police personality-performance relationship should emphasise the job-personality congruence and enable the researchers to identify specific aptitudes for each job. The latter can be accomplished through a detailed job analysis, which will be discussed in the following section.

Matching characteristics to policing through job analyses

Determining the attributes, knowledge, and experience that is necessary for excelling in a job is a key aspect for identifying the related personality characteristics. Most of the methods that have been developed by personality psychologists who used standardised descriptions of work (Murphy & Dzieweczynski, 2005). However, the ever-specialising characteristics of the professions in modern ages necessitate the development of structured inventories based on the analysis of jobs being studied. These analyses should shed light on the necessary abilities and skills to excel in particular jobs (Murphy & Dzieweczynski, 2005). Touzé (2005) suggests that experts in a certain profession can analyse the necessities of the job and identify relevant behaviour and dimensions of personality that are needed to perform better. Thus, a systematic analysis of a job by its own experts can identify 'potentially necessary personality dimensions' (Touzé, 2005, p. 49), and the validity of the inventory created by the experts can be examined through longitudinal studies (Hogan & Holland, 2008).

Based on their meta-analysis of 494 studies which examine the impact of FFM personality factors on job performance, Tett, Jackson, and Rothstein (1991) supported the usage of personality traits as a measure of job performance. However, they concluded that in order to realise the full potential of personality measures in the selection of demanded personnel, 'personality-oriented job analysis' should become the

standard practice to identify the traits which enable predicting performance on the job being studied, and 'psychometrically sound and construct valid personality measures' should be created through scientific research (p. 732). Tett et al. (1991) analysed 86 studies that examine correlations between the Big Five Factors and job performance and found that the studies that use job analyses resulted in much better correlation than those which did not use job analyses.

In order to grasp the effects of a personality trait on job performance, the situational demands of the job should be taken into consideration when analysing the job (Barrick & Mount, 2005). Touzé's (2005) review of the previous research on personality-performance relationship indicated that personality measures 'have better predictive validities when they are elaborated in a specific personality framework and then take into account a specific work situation' (p. 39). When the situation at work is relevant to the trait's expression and it is 'weak enough' to enable the individual to behave independently, the impact of personality trait becomes more visible (Barrick & Mount, 2005). In that sense, there are some strong situations in work life that oblige people to behave in certain ways, which makes the individual differences less visible in the work place.

In parallel with Allport's (1955) analogy of idiom, Murphy and Dzieweczynski (2005) suggest that to determine the predictive power of personality in job performance we might need to analyse the context in which the job is done in addition to the analysis of a job itself. Touzé (2005) makes a distinction between task performance and contextual performance in terms of the personality-performance relationship. Task performance is related to the technical and central aspects of a job, whereas contextual performance refers more to the peripheral activities that maintain the social and psychological environment in an organisation (i.e., enthusiasm and extra effort, volunteering, helping and cooperating with others) (Touzé, 2005). Touzé (2005) reviewed several meta-analyses and concluded that personality measures can better predict contextual performance than task performance. In that sense, job analyses should consider the situational demands of the job and include the criteria for not only task performance but also contextual performance.

After the identification of the situational demands of a job and the criteria for both task and contextual performance, related personality traits can be determined by observing the daily social interactions in the workplace. Allport (1927) suggests that personality measurement can be accomplished through describing the behaviours of people in daily social interactions that are related to the trait in question. In fact, he defines personality as 'the adjustment tendencies of the individual to his social environment' (Allport, 1927, p. 36). In that sense, they conclude, the purpose of measuring personality is 'the establishing of adjustments between an individual and his fellows' (p. 36). In a self-rated personality test, the purpose is asking questions about what the subject actually does in his daily life, thus letting the subject judge himself through his habitual behaviour (Allport, 1927). Whether it is a self-assessment or a third-person assessment, valid measures should be developed to match the personality characteristics to certain jobs by allowing the raters to assess personality characteristics through an observation of daily life activities. The problems of current personality measures being used in predicting police performance will be discussed in the next section.

The need for better personality measures

Scientific research uses basic units for measuring certain phenomena and testing the theories in related disciplines. In personality psychology, the basic unit of analysis is 'trait' which is considered both as the reason for regular and consistent types of behaviour and as the concept that is used to define those behaviours (Dumont, 2010). According to Allport and Odbert (1936), to qualify a behaviour as a trait, it should occur repeatedly in generally similar situations. Allport (1927) defined trait as 'a general and habitual mode of adjustment which exerts a directive effect upon the specific response.' (p. 4). He suggests that a trait can be known through its results or fruits, not by its causes or roots. To measure

these results or fruits and categorise people based on their personality dimensions; inventories, questionnaires, and tests have been developed by psychologists through sophisticated statistical methods such as factor analysis (Dumont, 2010).

The personality measurement tools that are being used currently by police departments for personnel selection purposes are problematic. First of all, inventories such as MBTI, MMPI, 16PF, and the CPI are not designed to measure job-related characteristics, and there is almost no evidence that shows their relevance to organisational criteria (Murphy & Dzieweczynski, 2005). Based on the insufficiency of psychopathology and normal personality tests in predicting the job performance in law enforcement services, Aamodt (2010) concluded that the most valid personality tests are those that include the scales built on the results of job analysis, and future research should focus on creating personality inventories for police officers based on the personality traits that will be identified through job analyses. Such an analysis was conducted by DeFruyt et al. (2006) to create an inventory of interviewing competencies of police officers and examine the underlying structure of these competencies. The list of 66 competencies which are likely to be related to interviewing success (e.g., being communicative, empathic, persuasive) were created by the authors through literature review and by consulting with the experienced police interviewers. The predictive validity of the final product, which is called Police Interview Competency Inventory (PICI), demonstrated by both the researchers and Smets (2009) in a later study through experimental research on police cadets. Similar inventories can be developed for each job category, and even for certain tasks under these categories.

Second, the current personality tests being used consist of broad personality measures such as conscientiousness and agreeableness, and these measures may not be sufficient to predict 'the functional relations' between personality and performance as they can disregard the situational factors that affect the performance (Murphy & Dzieweczynski, 2005, p. 346). The personality measurement tools that include narrow traits, rather than the broad ones, might be more successful in predicting specific sets of behaviours, because such traits rely on explicit description of personality that considers various factors such as the time, place, and the role of the individual in a society or group (Barrick & Mount, 2005). Barrick and Mount (2005) suggested that global personality traits like the FFM factors are useful in theoretical explanations; however narrower trait constructs are needed to predict specific behaviours at work. In that sense, police personality measurement tools should be developed based on job-related criteria which can be identified through examining the job description and analysing the necessary tasks for the job by accompanying police officers on different shifts. By observing the police tasks on the spot, police psychologists can better understand 'how certain personality characteristics can either help or hinder a police officer to fulfil the essential job functions' (Serafino, 2010, p. 45).

DISCUSSION AND CONCLUSION

The historical development of police personality measurement efforts that aim to predict job performance showed that police personnel selection process is not free from the problems that Murphy and Dzieweczynski (2005) brought forward in general terms. The two major types of tests used in police departments – psychopathology tests (e.g., MMPI) and normal personality tests (e.g., Five Factor Model) – suffer from the lack of specificity that is necessary to match certain personality characteristics to job-related criteria. Even the inventories such as IPI that were designed for police selection purposes do not address this problem because they primarily aim to eliminate unsuitable candidates based on the criteria which are not directly related to policing such as alcohol abuse and family conflicts. Therefore, the three concerns that Murphy and Dzieweczynski (2005) discussed on the personality-performance relationship are also valid for the current applications in police personality assessment.

The remedies that were discussed above to address the three problems – developing a sound theoretical framework, paying attention to match certain personality traits to job-related criteria, and creating more valid personality measures – can also be applied to the policing field. First of all, a theoretical

framework that will enable researchers and practitioners to explain how certain personality traits are congruent with the duties and tasks of police officers should be developed. Second, to understand this congruency, the personality-oriented analysis of police work should be the standard practice. Through the analysis of specific tasks of police officers by the experts, the situational demands of policing, the job-related criteria, and thus, the personality traits that are necessary to accomplish those tasks can be identified. To increase the predictive power of the personality measurement, the necessary criteria for both task performance and contextual performance should be examined in the analysis of the tasks of police officers. This can be accomplished through on-the-spot observations of police workplace and behaviours by the experts of each specific area in policing such as counter-terrorism units, patrol police, riot police, etc. As a result of these observations and analyses, designated measurement tools can be developed specifically for police departments instead of the questionnaires currently used which consist of broadly defined personality traits and psychopathology measures. Moreover, inventories might be created for specific tasks in police departments as the PICI tool that was created by DeFruyt et al. (2006) to assess interviewing-related competencies of police officers.

Personality psychology has developed significantly since the early 20th century. The creation of Five Factor Model by McCrae and John (1992) increased the attention paid by psychologists and practitioners on the assessment of personality after three decades of arguments about whether personality matters in workplace success. Police departments and the research on police psychology have been affected by these developments in personality psychology. Future research on police personality assessment should focus on the possible solutions to the three problems that are addressed in this paper. Research that will be supported with sound theories and valid measurement tools will help police departments to identify the right personnel for each position in the force, which will increase the efficiency while decreasing the costs of wrong decisions in personnel selection. This can be achieved by a closer cooperation between police departments and personality psychologists. Psychologists can be employed in police departments for these purposes. The observations of these scientists about the workplace behaviours of police officers from within the force might not only enhance the capacity of the department to make valid decisions on personnel selection but also enable these researchers to conduct externally valid research studies on-the-spot.

Ethical statement

The author states that: (i) This study has not been funded by any organisation; (ii) There is no conflict of interest in this study; (iii) There are no human or animal participants in this study, therefore ethical approval and informed consent has not been included; and (iv) This material has not been published in whole or in part elsewhere.

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Intramuscular injection and its impact on perspectives in mental health medication, psychotherapy, ethics, peer process, and recovery

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The advent of the three-month injectable intramuscular (IM) injections for antipsychotic medications is a giant step forward in traditional medication management in mental health. This advancement should be a signal to clinicians, and peers in mental health alike, that thinking beyond immediate symptom management and stabilisation needs to be an urgent and necessary shift in the current medication management paradigm. As practitioners in mental health, we set goals and objectives with our consumers and are too often limited by the crisis driven needs of those on oral medications with higher statistics for relapse and a lower medication efficacy. This is an important advancement in delivery systems for this class of medication, signalling that there are more available treatment options for those carrying a diagnosis of schizophrenia and schizoaffective disorders. We need to move beyond the stigma that IM injections are for those just labelled 'non-compliant' but is, in fact, another option for people committed to their mental health. This discussion will hopefully raise a larger conversation and should not be taken as a recommendation to do anything. Instead, it is information to supplement the knowledge of mental health consumers, raise awareness, and provide the importance of choice to a person's treatment carrying these diagnoses.

Keywords: intramuscular injection, medication, mental health, psychotherapy, recovery

BACKGROUND

As a practising psychotherapist, I am looking forward to writing treatment plans for consumers on the new three-month injectable antipsychotic intramuscular (IM) injection with goals that truly capture the desires, hopes, and dreams of all people diagnosed with schizophrenia and schizoaffective disorders. It is my personal and professional experience that IM injections have a greater threshold for efficacy and fewer instances of relapse than oral medication delivery systems for clients suffering from severe and chronic symptoms. Traditionally, psychiatrists only considered IM injections appropriate for patients labelled 'non-compliant' or too dysregulated to manage their own medication.

Now, more and more people carrying a diagnosis of schizophrenia and schizoaffective disorder with a vested interest in their recovery are choosing the more reliable method and route for adhering to their mental health medication and treatment given the IM's greater evidenced and documented possibilities for more successful outcomes. Historically, people on an IM-only option to obtain their medication administration at a hospital ER, or clinic were limited to weekly, then biweekly, and then finally, monthly maintenance appointments.

Now, finally, there is another option that allows people to live their lives in an environment other than ER waiting rooms and mental health clinics in order to adhere to their mental health treatment. For those who have chosen recovery over illness, we now have a medication delivery system that supports our lifestyle, our choice to be successful and happy in our lives, and live beyond the disorder. Unquestionably, the likelihood of consumers achieving their goals and objectives has increased with this shift in medication management and hopefully, will be the beginning of a continuing shift in mental health treatment for this population.

I am not recommending medication or outlining the risks versus benefits. I am instead raising a necessary and often overlooked discussion about what we consider effective medication management in mental health for a population labelled 'untreatable, non-compliant and dangerous' by practitioners and members of the mental health community. This is an important advancement in delivery systems for this class of medication, signalling that there are more available treatment options for those carrying a diagnosis of schizophrenia and schizoaffective disorders.

IMPLICATIONS

Medication Management

Medication monitoring sessions across treatment milieu's in mental health is now challenged with limited face-to-face contact time with consumers, typically 15 minutes per session (Kendrick & Pilling, 2012). Making the situation even more difficult is the increased caseloads which prescribers are tasked with and assigned. Between the limited contact time psychiatrists have with consumers and the increased caseloads assigned to each psychiatrist – on the level of volume alone – doctors and nurse practitioners are finding themselves prescribing more medications with less exposure to each patient's clinical picture.

The management of prescriber face-to-face time, both the quality of time spent with consumers, and the ongoing assessment, evaluation, interpretation, and planning that is involved with each medication monitoring session hinges on more than just the time per session. In fact, it goes beyond the skills of the prescriber too. Today's medication management is not just challenged with limited time, increased caseloads, medication volume, and the limitations of the psychiatrist's ability to interpret the consumer's clinical picture. Medication management with this particular population is challenged above all with negative attitudes towards consumer adherence, and unresolved issues of stigma that

still lingers with patients carrying a diagnosis of schizophrenia and schizoaffective disorder (Vanheule, 2017).

These unresolved issues of stigma and negative attitudes towards consumer adherence are long standing and are enmeshed into the very fabric of research that is involved with consumer adherence to antipsychotic medication and make up the contents of sessions reinforcing adherence using adherence therapies and or medication- focused conversations (Pinto-Coelho, 2017). There is no question that the contents of sessions for consumers on the three- month IM will begin to shift as changes in medication management shape the new therapeutic landscape. This will occur on both on the level of practitioner in terms of attitudes towards consumers, as well as allow the practitioner to reclaim valuable session time on clinical formulations and evaluation of the consumer's clinical picture.

Interventions in psychiatry and psychotherapy

In light of psychiatric hegemony (Relojo, 2017), the impact of the three-month injection on interventions in psychiatry and psychotherapy will be profound. On the level of psychotherapy treatment planning alone, clinician's will have an opportunity to establish goals and objectives that is more realistic, and more attuned with the needs and desires of the consumer. More importantly, therapists can reduce the intensity of adherence therapy, which consumes session time, and functions to absorb time needed to cover a breadth other materials needed for consumers to be successful in their recovery and move forward in their treatment.

Psychotherapy and psychiatric medication monitoring sessions can begin to target tools consumers need to continue on in their treatment. Time can thus be spent on ongoing assessment necessary for clinicians to understand their consumer's clinical picture (Shortell, Bennett, & Byck, 1998), and the development of coping skills, mood regulation exercises, and most importantly, disputing irrational beliefs and cognitive distortions that are so prevalent with consumers carrying a diagnosis of schizophrenia and schizoaffective disorder (Acharya, Pilao, dela Rosa, 2017). Reclaiming session time has infinite possibilities depending on how the clinician will utilise the added time in session from not targeting adherence and routine crisis-driven conversations from oral-based routed medication delivery methods.

Most importantly, consumers will begin to benefit from a shift in attitude toward them and their treatment as discussions of compliance exits the psychotherapy session and full adherence is embraced by consumers. There is no question that stigma and negative attitude toward this population has a significant role in consumer outcomes, success in treatment, and motivation to continue moving forward in recovery. Research suggests that negative attitudes play an important role in consumers allying with their therapists and psychiatrists, establishing an intact therapeutic alliance, and fully embracing the recovery process (Servais & Saunders, 2007). This is extremely important for this population, as paranoia and other symptoms may interfere and complicate the therapeutic alliance, making it difficult for consumers to trust their therapist or summon the energy to make to session at the clinic.

Redefining the peer relationship

Peer specialists in mental health, and the peer movement continues to complicate practices in traditional treatment to this day, as well as play an important role in battling stigma and reshaping the attitudes clinicians have of their consumers. While peer specialists cannot and should not engage in telling consumers to discontinue their medication or recommend a medication to their peer in recovery the three- month injection will reshape conversations in the peer process and dislodge the complexities and ethics from conversations around adherence from the peer process. By eliminating this issue, peers

can continue to focus on support around recovery, and then become a real ally and partner in the recovery process. Conversations between peers can begin to target moving through the mental health system, and not enmeshed around ethically unsound medication-focused discourses, which are, truly, with little exception, outside the role of the peer and primarily assigned to the clinician.

While peers can help consumers establish a voice around their medication concerns to share with their prescriber, there is no question that the peer process is rooted in establishing a mutual relationship to aid consumers in their recovery and move through the mental health system toward recovery. Therefore, the advent of the three-month injection allows consumers engage with their peer in conversations that support the recovery process without complicating the clinical process, but instead, enhancing it, by providing a real space for consumers to connect with their peers without entering ethical and clinical grey areas that can be discrediting to the peer process and derail the consumer's treatment.

Recovery-focused attitudes

Ultimately, now, consumers will be able focus on their recovery and not become dismayed by the limitations of today's medication management. The three-month injections thus opens up a space for consumers time and energy to focus on themselves, their needs for the recovery process, as well to establish a set of expectations for improvement in functioning based on their learned skills in psychotherapy, and from the peer process, instead of externalising and crediting their gains and setbacks to be the product of weekly or monthly changes to their medication, its dosage, or even worse, from lack of adherence.

The recovery process is complex. Full adherence given a consumer's choice to go on an IM further eliminates ambiguity when therapists and psychiatrists are evaluating the effectiveness of medication to manage a consumer's symptoms. Research suggests that a full adherence on an IM increases the efficacy of a medication and decreases instances of relapse (Gaudiano, Weinstock, & Miller, 2008). More importantly, consumers can now focus on goals beyond immediate crisis and symptom stabilisation.

Undoubtedly, consumers engaging in long-term goal setting are more likely to focus less on problematising the everyday problems faced during the recovery process which, research suggests, are short-term issues that resolve themselves with time, either on a stable medication regimen or simply by the passage of time (Epstein & Cluss, 1982). Thus, consumers can begin planning for tomorrow and focusing on taking bigger steps in their recovery without worrying about the present, all the time, which, research suggests, is demoralising for consumers and a definite roadblock in long-term gains in treatment and the recovery process (Dunn, Andersen, & Jakicic, 1998).

Ethical considerations: Dignity and risk and risk of harm

Unquestionably, the spectrum between negligence and overprotection carries with it serious implications in clinical and peer professional practice in mental health. Even in our personal lives, we have friends and family we care for and we wonder where the line is drawn when it comes to caregiving or caring for a friend struggling to maintain their own safety living independently. For therapists, peers, and psychiatrists, the landscape between the two poles of negligence and overprotection is even more unclear, sometimes, and in dispute for interdisciplinary teams with workers from different ethical stances.

Dignity in risk is understood by most practitioners and peers as the chance, choice, or possibility of a patient failing in their goals or capacity to self-manage independently. It means there is a level of self-

worth cultivated by people when they are left to their own devices to make choices for themselves. Call it self-esteem, or self-respect; people generally feel better about themselves when they are given the opportunity to fail at whatever it is they set out to do.

The problem with complete autonomy and 'free will' when you're in treatment is twofold: 1) Treatment is a contract between a provider and patient which carries with it the assumption of adherence and/or active participation in their own care; and, 2) Without any oversight from a provider, therapists, peers, and psychiatrists will run the risk of committing negligence or malpractice should something unforeseen happen to a client that may have been preventable should the client have been monitored and in active treatment.

The disconnect and the limits of the law

The limits of the law are clear. Every state in the US has a regulatory body that decides where this line is drawn between negligence and dignity of risk for therapists and psychiatrists. Peers professionals too, are working on actively drawing up plans to manage risk more effectively to reduce the likelihood of harm to clients and collaborate more closely with their clinical counterparts.

The law is written and very clear on paper so we abide by it in practice. The liminal space between theory and practice or praxis is where the line gets blurred when deciphering what to do with a client when their risk of homicidal or suicidal behaviour is unclear, or unable to be assessed.

In situations like this, besides your 'gut' feeling, on which side of the negligence versus overprotection spectrum do your instincts tell you to side? What will inform your choice: 1) Will it be the relationship you have with your patient; 2) their apparent mental status; 3) their level of mental distress; or 4) the level of trust between you and your client? More importantly, what does it say for you as a practitioner when you make your decision?

Forced treatment: An ethics of hope for people with severe and persistent mentally illness

By and large, we need to articulate the challenges with treatment of individuals with severe and persistent mental health illness (SPMI) who are non-adherent to the clinical recommendations of their providers. It is the intent of this article to outline why it is so important to seek out available treatment early on before symptoms worsen to the point where reality, judgement, and impaired insight preclude the afflicted individual from buying into available treatment options to experience relief from what could become chronic and persistent symptoms.

The available options for a course of treatment targeting chronic mental illness of course becomes more limited and more restrictive as the degree of chronicity increases and insight and judgement decrease to the point in which capacity is lost by the patient. In this article, the open dialogue approach will be evaluated for its limitations and benefits for SPMI populations as well as two available courses of forced treatment in both in patient and community-based settings.

In the recovery movement today, the open dialogue approach to treatment is showcased and renowned as the most effective treatment for SPMI populations and argued to be the only approach that works for producing long-term positive lasting outcomes. It is an approach that stresses a shared conversation between consumers and providers about forming a treatment pathway and medication regimen that is acceptable to all parties to promote adherence and reduction of non-compliance.

This really needs further unpacking because if an individual is in need of an extremely high level of care their symptoms may be so serious and chronic that relief or remission is often not realistic. This has

been evidenced by research time and again (Lynn, 2001). I have even experienced it as a patient with lived experience during multiple in patient hospitalisations and as a clinician practicing in the community.

There is no question the open dialogue approach is effective, humane, and appropriate for those who are accepting of their condition and have the insight and judgement to move forward in their recovery, but these are people who are adherent to treatment and on board with treatment recommendations from the onset of diagnosis so of course their rate of experiencing improvement in their condition is expected.

I have seen first-hand in state and local hospitals where people are placed in long-term care indefinitely because they refuse medication and all other treatment recommendations, experience no relief from their symptoms and are in turn too dysregulated to maintain their own safety in the community. Forced treatment in certain severe cases would provide many people, people like myself and others like me with a chance to live in the community again and 're-regulate' enough to continue their care and perhaps experience further improvement on an outpatient basis instead of locked away in a state ward for years or maybe decades.

Forced treatment can occur in an in-patient hospital as medication over injection or in the community with Assisted Out Patient (AOT) treatment in which the county mental health department monitors specific high risk individuals through a series of paper trails and reports which are reviewed every year or so to determine if the person can return to a lower level of care and voluntary treatment. AOT is usually provided by Assertive Community Treatment (ACT) teams and providers which conduct home visits as this population experiences issues with connectivity to clinics and benefit from closer monitoring from community-based treatment team

CONCLUSION

The impact of the three-month antipsychotic IM to social work is immense, layered, and profoundly important to the improvement of treatment for schizophrenia and schizoaffective disorder. Above all, the three-month injection signals that the importance of choice in consumer treatment is being taken seriously by clinicians during the treatment of these disorders which for so long have carried with them stigma and negative attitudes. More importantly however this advance remarks upon the rising numbers of consumers choosing adherence, and recovery over illness.

Ultimately, clinicians and peers will begin to reclaim much needed space in the treatment process for just that, treatment, which, for these disorders, will be a vital and much needed change to the execution of psychotherapy practices and medication management. Hopefully, the days of clinicians referring to consumers carrying a diagnosis of schizophrenia and schizoaffective disorder as 'untreatable, and non-compliant, or even dangerous' will be a distant voice of the past in mental health treatment.

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Interview with Dr Bruce Cohen, editor of the 'Routledge International Handbook of Critical Mental Health'

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Bringing together the latest theoretical work and empirical case studies from the UK, US, Europe, Australia, New Zealand, and Canada, the *Routledge International Handbook of Critical Mental Health* is considered to be the most comprehensive collection to date with which researchers and practitioners within the social and psychological sciences can systematically problematise the practices, priorities and knowledge base of the Western system of mental health. I recently interviewed the editor, Bruce Cohen, to find out more about this volume.

What initially inspired you to put together this collection?

As I outline in the preface of the book, it was sitting in sociology of mental health sessions at various conferences around the world and getting increasingly frustrated by the general lack of critical engagement. To give you but one example: I recently witnessed a presentation based on a quantitative mental health survey which suggested that young people in single parent families were more likely to suffer mental illness than those with two parents, likewise those growing up in black families – rather than mixed race or white families – were also more prone to growing up with a mental disorder. On the basis of these findings, the researcher concluded that professionals need to specifically target black, single-parent families for early mental health interventions. There was no consideration of the dubious measurement tool used to produce these results (namely telephone interviews with parents using a highly unreliable DSM rating scale), nor the long history of racism within the mental health system which has produced many similar ideas of fundamental 'deficits' within such communities, or indeed recognition of the general Eurocentric nature of groups of professionals who have previously targeted and subjectively labelled such groups as prone to mental illness and in need of treatment.

Over time, sociological research in the area has become increasingly conservative and non-theoretical, so I should really not be surprised that I have been sitting through more and more of these presentations. The greater concern though, is that the younger generations of researcher coming through now do not even *know* that there *are* critical debates to be engaged with, let alone how vital they are to reflect upon in producing considered knowledge on mental health and illness. That is the reason I decided that such a book was necessary – as a one-stop resource which extensively surveys different critical approaches and theories within the area, and hopefully gets these young scholars interested in finding out more.

What does it mean to be 'critical' in this case then? Why is it still important to engage with such ideas when thinking about mental health and illness?
In its broadest sense, being 'critical' here means challenging the common sense, taken-for-granted view of what mental illness is, what the mental health system does, and the purpose of different groups of mental health professionals within that system. So, each of the 36 authors in the book demonstrates a critical scepticism in engaging with their topic or theoretical approach as informed by the evidence (or lack of it in many cases).

The reason why it remains important to engage with such ideas is because the 'science' of mental illness is as contested as it was fifty years ago. For example: the causation for any mental illness remains highly contested; psychiatrists and other mental health experts cannot yet agree with any preciseness on the type of mental disease a person has, or indeed whether they are mentally ill or not; no treatment (drugs, ECT, or therapy) has been proved to work on specific symptoms of a mental illness, or as an ultimate 'cure' for a mental illness; and future cases of mental illness cannot be accurately predicted by mental health experts. These issues are reviewed in the book – a key question which is considered by many of the writers is why we have witnessed a recent expansion in the number of diagnoses, mental health experts, and forms of treatment available despite the problems with psychiatry's own knowledge base. Because such crucial questions remain, I believe that health, social and psychological scientists have a duty to the public to thinking critically in this area.

So would you agree that the book is generally taking an antipsychiatry position here?
No I definitely would not! Antipsychiatry is just one theoretical position out of a total 12 different critical perspectives which are outlined in the theory section of the book; these chapters range from updates of labelling and social constructionist positions through to critical realism, queer theory, critical race theory, critical psychiatry, and mad studies. The pigeonholing of anything which critically engages with the area of mental health as 'antipsychiatry' has been of huge detriment to progressing critical thinking in this area. And, I should add, also this does no service to understanding the tenets of the antipsychiatry position itself (something which Bonnie Burstow does a wonderful job of correcting in her chapter on the subject in the book).

I should add that something that I am rather proud of in bringing together the 30 chapters in this collection is that the authors do not share the same point of view or positionality on the subject: while some of us are radical scholars who argue for the abolition of the mental health system, many others prefer to be considered as pragmatists who see the potential for a socially-just mental health system in the future. This is probably less of a surprise when one considers the diversity of backgrounds brought together in the volume: almost half the writers are former or current mental health professionals, a similar number are scholars based in sociology, social work, or a related area, while the remainder are scholars from a variety of other disciplines including cultural studies, education sciences, anthropology, philosophy, and development studies.

Apart from the theory section you have just mentioned, I notice the rest of the book applies these ideas to topics such as medicalisation, the politics of diagnosis, and talk therapy. What specific chapters do you think would appear to the readership of *Psychreg Journal of Psychology?*

Well, taking a guess, I would say Gil Eyal's chapter on 'Autism looping' will appeal to many – that's a very interesting historical analysis of the reasons for the expansion of the autism diagnosis among children previously institutionalised with a variety of 'learning difficulties'. Owen Whooley's chapter on the DSM and what he calls 'the spectre of ignorance' among the psychiatric profession is a really fascinating discussion of the production of the third and fifth editions of the manual, even for those who might be new to the whole DSM saga. I would also recommend Emma Tseris' chapter on trauma therapy and feminist theory – the chapter provides a strong cautionary tale on the dangers of what might appear at first glance to be a completely positive and benign set of practices. Lastly, I am a big fan of China Mills' work on global 'psychiatrisation': her chapter on psychopolitics and coloniality of the Western mental health system should be essential reading for anyone who thinks the expansion of mental health services to the rest of the world is unproblematic.

Interview with Dr Stella Dickinson, author of 'The Clinician's Guide to Forensic Music Therapy'

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On 28th April 2017, I had the chance to visit the Freud Museum in London – a place dedicated to Sigmund Freud, who lived there with his family during the last years of his life. It was an amazing experience seeing both Anna and Sigmund's house. It brought the history of psychology to life and offered a glimpse of what it was like to live through World War II. But the visit became even more memorable because I had the chance to meet and interview Dr Stella Compton Dickinson.

Dr Compton Dickinson is the author of *The Clinician's Guide to Forensic Music Therapy.* She is a London-based Consultant Psychotherapist, Health and Care Profession Council registered music therapist, accredited supervisor, professional oboist and lecturer, UK Council for Psychotherapy registered Cognitive Analytic Therapist and Supervisor. Dr Compton Dickinson has her own private psychotherapy practice and twenty years' experience in the National Health Service (NHS) as a Clinician, Head of Arts Therapies and Clinical Research Lead. Also, her research was awarded the 2016 Ruskin Medal for the most impactful doctoral research.

Why did you choose to work as a forensic music therapist?

My whole life has revolved around music and horses. My father discouraged me from following in the family footsteps toward the latter. Having had a successful career as a classical musician, and after a life-threatening illness I trained as a music therapist because I wanted to explore formally how music could be healing.

While I was at the Guildhall School of Music and Drama, I had a placement in intensive care psychiatry and on a residential adolescent unit. I knew that I had found my calling.

At that time, there was a move toward community care and a choice had to be made between continuing to work in acute psychiatric settings where patients come and go quickly, or in a secure hospital setting where there was the possibility to do research.

At a deeper level, considering how the human species, and in particular the brain, may evolve, my curiosity was stimulated at a conference exploring Darwin's *Origin of the Species* and how creatures adapt to their environment. Survival of the fittest is sometimes misunderstood as linked to aggression, but 'fit' also means an ability to adapt to the environment as well as to be cooperative and smart. I treat men and women who have instinctually responded aggressively. Animal behaviourists have learned that species such are the Bonobo apes sustain a harmonious society without aggression by having highly developed social structures and empathy, for example by caring for an orphaned infant.

If apes can do this, surely human beings should be able to develop more compassion and understanding for what makes an individual go wrong. I hope that greater understanding of the brain and the mind, rather than judgements, may develop in society helping us move toward building a culture in which kindness and a compassionate approach to disability and mental illness will prevail.

What does your work involve?

Patients with serious mental illnesses who have committed an offence are admitted under a mental health section to a secure hospital setting. A multidisciplinary team will assess, from different perspectives, the individual's needs and they will explore why the individual has responded negatively to a situation: whether they know the difference between good and bad, right and wrong, whether they are motivated to strive towards the light or are consumed by darkness.

The ways we relate affect all of us and our behavioural responses are triggered by our thoughts and emotions. These can become polarised between love or hate, resentment and bitterness, or alternatively a desire to understand oneself and make amends for wrongdoing. The latter is called restorative justice and this process can sometimes follow from retributive justice after an individual has served a prison sentence.

When working with men and women who have killed, one has to see the better side of the patient in order to form a therapeutic rapport and yet still assess risks of violence. The high secure hospitals are actually quiet, safe places where the patients have a lot of time to think about what went wrong in their lives.

In contemplating just how aggressive the human species can be one of my friends once said to me: 'There but by the grace of God go us'. He meant that there is the capacity within every human being to be violent. I have treated numerous patients during my time as Head of Arts Therapies in a High Secure Hospital and with only rare exceptions, they all had redeeming qualities and they all taught me something about human nature and the mind.

Forensic psychiatric treatment is focused on breaking the vicious circle of abusing to abused, attacking to attacked, humiliating to humiliated, enactments between individuals, organisations and society. Research suggests that this is possible if patients are thoroughly assessed for their risks and need principles; the treatment can then focus on preventing relapse (Marlatt & George. 1984), which is to everyone's advantage.

There are three levels of security in forensic psychiatric treatment: low, (short stay); medium; and high secure (long stay) hospitals. I have worked in all three. If the offence was not premeditated and the individual has a mental illness that is deemed to be treatable, the court sentences them under grounds of diminished responsibility, meaning that the person was psychotic when he committed the offence. The secure hospitals are run within the NHS because anyone with a mental illness is entitled to treatment towards recovery and a more normal life. The main concern in forensic psychiatric treatment is towards reduction of risks of harm to the general public, or to the patient who may feel suicidal with shame.

What results have you seen?

Music therapy was new to the hospital in 2001, when I was appointed. Many treatment-resistant patients who had been incarcerated for many years started to change in music therapy. This was quite shocking for nursing staff, some of whom thought that these patients would never change.

In forensic music therapy the overall goal is focused around the impact on the brain and the body of carefully attuned, jointly created musical improvisation. In this way, creative expression, primarily through music rather than words, can help to transform the lives, responses and functioning of individuals who have been profoundly damaged and damaging.

The active ingredient of change that was tested in the research project was jointly-created musical improvisation within a carefully structured, manualised form of music therapy that is integrated into an evidence-based form of psychotherapy. The model is known as Cognitive Analytic Music Therapy.

The patient works interactively with the music therapist who can enable the patient to extend his range of self-expression, even if he has never seen or played an instrument before.

The results of the randomised controlled trial that I implemented compared a group of patients who had standard multidisciplinary treatment (MDT) with a demographically- matched group who had the same MDT treatment plus Group Cognitive Analytic Music Therapy (G-CAMT).

The analysis showed that with the additional G-CAMT intervention patients became more sociable, not only in their therapy groups but replicated in behaviours on the ward. There were fewer risk incidents and their behaviour became less intrusive or possessive.

At two-year follow-up, those in the treatment group moved on more quickly from high secure treatment and so this provides a cost-effective element. These are very exciting results that require a larger multi-centred randomised controlled trial. That is just one reason why the book has been published –because it includes two treatment manuals so that Forensic Music Therapists in other countries across the world can implement this evidence-based model and participate in a future research project.

You have recently written the book *The Clinician's Guide to Music Therapy,* what do you hope this will achieve?

Treating these patients is challenging, requires enormous commitment, dedication and resilience on the part of all members of the care team, and yet it can be extraordinarily rewarding. The motivation of myself and my co-author in writing *The Clinician's Guide to Forensic Music Therapy* has been to encourage future generations to build on what has already been done, by learning from what, to date, is recognised as acceptable to patients and stakeholders. The two treatment manuals were painstakingly and systematically developed, so that future music therapists can safely conduct their forensic clinical practice starting from the best available clinical evidence to date.

With the development of functional magnetic resonance imaging scanning, our knowledge of the brain has increased and there is a changing attitude in mental health towards the hope of recovery. Through this understanding of the plasticity of the brain, some conditions that were previously considered 'untreatable' might improve and adapt to injury, thereby leading to the instillation of hope and recovery. Laurien Hakvoort and I are the only two music therapy researchers who have developed and tested models of forensic music therapy that are specific for the treatment of offenders. We would like music therapists to use the manuals and all the advice all the tools that we have provided because vulnerable adults who are incarcerated have limited choice. In our research projects they consented to participate in our ethically approved research – this is very different to being the unwilling subjects of 'experiments'

in areas of the world where human rights may not be so rigorously upheld. I hope that I may be actively involved in mentoring and supporting the next generation of music therapists to develop their own research.

You have recently written the book *The Clinician's Guide to Music Therapy,* what do you hope this will achieve?

In my private practice, I specialise in Cognitive Analytic Therapy, to which I integrate aspects from my research findings as well as creative processes. I have successfully treated people with generalised and social anxieties and depression; young men and girls from the age of 16 who have suffered physical or sexual abuse and who may have self-harmed; busy mothers and businessmen who often have a tough time as they are stressed in juggling both family and work commitments.

I provide services for charitable funding organisations such as the Royal Society of Musicians, Help Musicians UK and Equity Charitable Trust who assess financial means of applicants and provide funding so that I can treat performing artists. I understand their difficulties because I have been there myself.

My clients are lovely people, often incredibly caring of others to such a degree that it is to their own detriment. To make it in the performing arts means total dedication and focus on one's goal, therefore putting in lengthy hours similar to an athlete.

The use of drugs and alcohol is so all pervading now and yet so damaging to motivation, the brain, and creativity that quite a lot of the work involves addressing alcohol and substance misuse. I have also moved back to my first area of specialism in working with people who are in recovery from cancer. This was my first area of interest in music therapy too, because I had just recovered from a life-threatening illness after which I had to re-evaluate my lifestyle. Recovery for me was at a holistic level of psychological growth and in learning how to connect healthily to my own body, so there is an autobiographical aspect in using my self-development to help others.

Reference

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