The role of Trait Emotional Intelligence on Substance Use and Mental Health in University Students

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Abstract

Students at university are under a lot of pressure, some students cope well while others succumb to substance and/or mental health problems. One possible explanation why some cope better than others is Trait Emotional Intelligence (TEI). Students (N=178) were recruited to participate in the study, (Females N=125, Mage=23.47) each participant answered five questionnaires (Trait Emotional Intelligence Questionnaire–Short Form, Alcohol Use Disorders Identification test, Drug Use Disorders Identification Test, Patient Health Questionnaire-9 & Generalized Anxiety Disorder-7) administered via qualtrics. To assess student self-reported levels of substance use and mental health and their TEI. Data analysis shows that higher levels of TEI have a significant relationship with lower levels of drug use, anxiety and depression, however, no relationship was found for alcohol use. This research supports what other researchers have found, that TEI may be a protective factor against developing these problems (Davis & Humphreys, 2012). Universities could introduce programmes to students educating students before these issues become problematic.

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Content

Introduction

Students face a lot of pressures while studying at university. Some students cope incredibly well while others struggle and succumb to the pressure, resulting in mental health issues and uses of drugs and/or alcohol. University students report higher levels of mental health problems compared to a similar age group of non-students (RCPsych, 2003). One study looked at 1129 university students and found that twenty-nine percent reported mental health problems and eight percent report moderate to severe mental health issues (Bewick, Gill, Mulhern, Barkham & Hill, 2008). Researchers studying drug use in 1276 student found that drug use peak around the age of 20 for students having higher levels of drug use compared to a non-student sample (Bennett, 2014). Heather and colleagues (2011) surveyed 3075 students and found that 65 percent scored 8 or more on the Alcohol Use Disorders Identification Test (AUDIT) and 40 percent being classed as dangerous drinkers. An increasing body of research has attempted to understand why some students cope better than others. One explanation comes in the form of Emotional intelligence (EI), which has received a lot of interest in recent years, with EI being used to study many different types of behaviour including mental health and substances uses (e.g. drugs & alcohol).

Emotional Intelligence

EI is defined as a subdivision of 'social intelligence' (Thorndike, 1920). It is described as allowing an individual to understand emotions in themselves and others (Claros & Sharma, 2012; Mayer & Salovey, 1997). Mayer, Caruso and Salovey (1999) describe EI as an ability to recognise the meaning of the emotions displayed and to develop an appropriate response to the emotion. The Four Branch Model of EI developed by Mayer et al., (1997) has four primary components 1) accurately perceive emotions, 2) using the emotions to think and

solve problems, 3) understand the meaning of emotions and 4) controlling one's emotions (Mayer & Salovey, 1997). Now defined as more of an ability-based emotional intelligence commonly referred to as ability emotional intelligence (AEI or Ability-EI), although, other researchers have adapted or developed their own models. Trait emotional intelligence (TEI) is different to AEI. Both of these models differ in the ways they are measured (Brannick, Wahi, Arce, Johnson, Nazian & Goldin, 2009). TEI looks at self-perceived emotions, skills, emotional capacity and personality traits that affect an individual's coping ability (Petrides, 2011) measured using a self-report questionnaire, Furnham and Petrides' (2003) model is described as a 'constellation' of different traits being made up of four factors 1) Well-being, 2) Self-control, 3) Emotionality and 4) Sociability. However, a criticism of TEI is that it measure very similar aspects to that of a personality questionnaire (Bastian, Burns, & Nettlebeck, 2005). Whereas, AEI is a performance-based measure that is concerned with how many questions the individual gets right or wrong and is closer to a standard intelligence test (Petrides, 2011).

EI is seen as an important factor that is needed to succeed throughout life (Brown, Chiu, Neill, Tobin & Reid, 2010), and is now seen as an important aspect of working life, job performance (O'Boyle, Humphrey, Pollack, Hawver & Story, 2011) and academic performance in students (Chew, Zain & Hassan, 2013). High levels of EI has been found to act as a protective factor, increasing an individual's coping ability and decreasing the risk of mental health issues (Davis & Humphreys, 2012; Zeidner, Matthews & Roberts, 2009) and abusing alcohol or drugs (Brown et al., 2010). Alternatively, low levels of EI are associated with anxiety (Weaving, Orgeta, Orrell & Petrides, 2014), depression (Abdollahi & Talib, 2015), drug use (Haj Hosseini & Mehdizadeh Zare Anari, 2011) and alcohol misuse (Schutte, Malouff & Hine, 2011). However, EI has come under much criticism from researchers,

arguing as to whether EI is a validated construct (Davis & Humphreys, 2012) when compared to general intelligence (GI: Waterhouse, 2006) or cognitive intelligence (Brody, 2004). However, a recent study by Singh and Sharma (2012) compared both GI and EI looking at chronic and acute stress levels. The researchers divided the participants into four groups based on their GI and EI score (E.g. group 1: low GI - low EI, group 2: high GI - low EI and so on). The researchers found that participant with higher levels of EI performed better on the psychological tests and had lower stress levels compared to GI levels, where there was no significant result found. These results add support to the validity of EI and to an increasing body of research that has found EI to be a valid measure (Cherniss, Extein, Goleman & Weissberg, 2006).

Depression & Anxiety

Mental health is an incredibly important public health issues, with universities seeing an increase in students seeking mental health help (5.9% in 2007 2008 to 9.6% in 2011 2012: Student mental well-being in higher education, 2015). The HSCIC (2007) stated that 23% of the general population will be affected by mental health issues this year and 15% suffering from depression (NICE, 2011). However, a recent systematic review looked 48,650 university students in 22 studies (Ibrahim, Kelly, Adams & Glazebrook, 2013). They found that between 10 to 85 percent (M=30%) of students had symptoms of depression. Depression is associated with physical illness, job loss, hopelessness, difficulties at school, relationship issues (Assh & Byers, 1996; Ciarrochi, Deane & Anderson, 2002). If depression is not treated then it can develop into self-harm (Hawton, Rodham, Evans & Weatherall, 2002). One study looking at 617 students and found that 27 percent reported self-harming at least once in their life and 9.7 percent reporting they have self-harmed since starting university (Borrill, Fox,

Flynn & Roger, 2009). Furthermore, if the depression is severe enough may lead to suicide (Mahmoud, Staten, Hall & Lennie, 2012). Suicide in universities is serious, with 517 cases of suicide between 2007 and 2011 with rates increasing from 75 per year to 112 per year according to the Office for National Statistics (n.d.). Individuals that had been diagnosed with depression have been shown to have low levels of EI but more seriously they also have a greater risk of rumination and suicide (Abdollahi & Talib, 2015). Other research found similar results between low EI and depression with an increased risk of suicide among student nurses (Aradilla-Herrero, Tomás-Sábado & Gómez-Benito, 2014). Anxiety is also a significant problem with 13% of the UK population suffering from the disorder (Rowney, Hermida & Malone, 2010). Anxiety is associated with distress, problems with functioning and a reduction in an individual quality of life (Martín-Merino, Ruigómez, Wallander, Johansson & García-Rodríguez, 2009), also having both depression and anxiety is common with 1 in 10 individuals being diagnosed (Haws, 2015). The risk of developing a mental illness is common among young adults (Blee, Reavley, Jorm & McCann, 2015). Individuals with lower levels of EI have been found to have a higher risk of anxiety (Connor & Slear, 2009), with anxiety being found to be one the most prevalent mental illness among students starting university (Cooke, Bewick, Barkham, Bradley & Audin, 2006).

Alcohol & Drugs

Addiction to drugs and alcohol can have severe consequences for an individual, with high levels of usage having a severe impact on academic performance (Ansari, Stock & Mills, 2013; Balsa, Giuliano & French, 2011). The HSCIC (2014) reports that 1 in 11 (8.8%) between the age 16 to 59 have used some kind of drug between 2013 and 2014, but for 16 to 24-year-olds this usage doubles (18.9%). The DSM-5 (American Psychiatric Association,

2013) state that prolonged use of drugs can be associated with a physical and mental health decline. The HSCIC (2013) report that 24% of adults in England, aged 16 and over have issues with alcohol, and young adults were more at risk of abusing alcohol compared to older adults. The effects of alcohol misuse can be associated with physical and mental health problems, social decline (Saunders, Aasland, Babor, De la Fuente & Grant, 1993), sleep problems, accidental injuries and nausea (Maistro, Galizio, & Connors, 2004). University students have been found to consume above and beyond safe limits in regards to drugs and alcohol (Webb, Ashton, Kelly & Kamali, 1996; Heather et al., 2011), A possible reason why student drink to excess is the increase in freedom from the transition from school/college to university, this may increase the risk of using a greater amount of alcohol (Schulenberg & Maggs, 2002). It has been found that there is a relationship between low levels of EI and alcohol misuse (Schutte, Malouff & Hine, 2011) and drugs use (Haj Hosseini & Mehdizadeh Zare Anari, 2011) or both alcohol and drugs (Riley & Schutte, 2003). Goleman (1995) looked at individuals with substance abuse problems in a drug and alcohol rehabilitation centre. Individuals that had problems with substance misuse had lower levels EI; he also suggested that other major factors were problems of managing their emotions and issues with delaying gratification, although this study is difficult to generalise to a student population. However, students with lower levels of EI have also been found to have more issues with delaying gratification and are less focus than those with higher EI and may perform below their true academic ability (Goleman, 1995).

Relationship between mental illness and drugs & alcohol

There are multiple risk factors that can contribute to individual using substances (alcohol and drugs) these can be the result of stress, anxiety or depression (Crutchfield &

Grove, 1984; Khantzian, 2013, 1997; Mauro, Canham, Martins & Spira, 2015; McCabe, Boyd, & Teter, 2009). This link between mental health and substance use can be greater for students as the pressure to do well, increasing the amount of work while at university, leaving home for the first time, peer pressure can all increase the risk of anxiety, depression and stress in students (Voelker, 2003). As well as symptoms of depression peaking between the ages of 15 to 18 (Ferro, Gorter & Boyle, 2015) and can be exacerbated by major life events or changes (Kendler, Karkowski & Prescott, 1999), such as leaving home and going to university (White, McMorris, Catalano, Fleming, Haggerty & Abbott, 2006). Add to this a dangerous amount of alcohol consumption (E.g. Webb et al., 1996; Heather et al., 2011) and this can all lead to a dangerous combination for many undergraduate students. Furthermore, some individuals that suffer from anxiety may seek to self-medicate using alcohol (Crum et al., 2013; Kushner, Sher & Beitman, 1990), especially when first starting university, where new students are anxious or have symptoms of anxiety (Cooke et al., 2006) and drinking or drugs may seem like an easy option to get over the nerves. In others, students suffering from homesickness when leaving home for the first time may result in symptoms of anxiety or depression (Thurber & Walton 2012). Some individuals suffering from depression may choose to use drugs (Weiss, Griffin & Mirin, 1992) or alcohol (Barbosa-Leiker, McPherson, Cameron, Jathar, Roll & Dyck, 2014) to alleviate symptoms of the disorder (Bizzarri et al., 2007). This links back to the main purpose of this research and how TEI may play a role in why some students are able to cope with all of these pressures while other students do not.

Past Research

To understand this relationship a lot of research has been conducted on young adults and students looking at mental health and substances uses in relation to EI. Riley and Schutte

(2003) carried out research looking at undergraduate students and a community sample. The researchers looked at EI, alcohol and drug problems in relation to coping. They used four questionnaires (Emotional intelligence scale; Self-Administered Alcoholism Screen Test; The Drug Abuse Screening Test; The Behaviour Attributes of Psychosocial Competence Scale), to determine alcohol and drug uses and whether these were a problem. The researchers found that low levels of EI had a significant relationship with higher level of alcohol and drug uses whereas emotional intelligence significantly correlated with coping skills.

Claros and Sharma (2012) looked at 199 college students and their relationship between AEI and alcohol abuse, marijuana and tobacco uses. They looked at EI abilities total scores and construct scores using Schutte self-report Inventory (SSRI), AUDIT, Fagerstrom test for Nicotine Dependence (FTND) to study tobacco and marijuana screening inventory (MSI). They looked at what parts of EI ability (perception, utilisation, understanding and regulation) significantly predicted alcohol, drug and tobacco use. The researchers found that EI predicted alcohol abuse and marijuana uses in college students, with understanding significantly predicting AUDIT scores and utilisation predicting MSI scores, but did not predict tobacco uses.

Davis and Humphreys (2012) studied 412 students from four different schools in the UK. They looked at both trait and ability EI to identify whether certain types of life stress in everyday life (e.g., socio-economic adversity, negative life events & family dysfunction) and whether this exacerbates symptoms of mental illness (e.g., disruptive behaviour symptomatology & depression) among adolescents. They found that high levels TEI reduced the risk of symptoms of mental illness, whereas high levels of AEI had the opposite effect and increased the risk between each of the variables.

Connor and Slear (2009) studied the link between EI and anxiety; researchers looked at graduate students and found that the students with high levels of EI had lower levels of anxiety compared to students that had lower levels of EI and higher levels of anxiety. Research conducted by Smith, Saklofske and Yan (2015) looked at 645 Undergraduate students. The researcher looked at neuroticism and perfectionistic using TEI as a mediator between the two, while taking into account psychological outcomes with two of these being depression and anxiety. They found that TEI negatively correlated with depression and anxiety, in other words individuals with higher levels of TEI was associated with lower levels of depression and anxiety.

One of the issues with past research is that most of the studies focus on either the mental health aspects (e.g. Connor & Slear, 2009; Davis & Humphreys, 2012) or the alcohol and drug uses (see Claros & Sharma, 2012; Schutte et al., 2011). This research only seeks to understand the uni-dimensional relationship rather than the interaction between the mental health issues and substance use. The interaction between substance use and mental health issues is significant (Schulte & Hser, 2014; RachBeisel, Scott & Dixon, 1999). Research in the area of EI is rare with even few studies looking mental health and substance use in this area (e.g. Abdollahi & Talib, 2015; Claros & Sharma, 2012; Connor & Slear, 2009; Haj Hosseini & Mehdizadeh Zare Anari, 2011; Weaving et al., 2014). However, there are a limited number of studies focusing on TEI and the relationship between mental health (e.g. Davis & Humphreys, 2012) and substance use (e.g. Schutte et al., 2011).

There are a few studies looking at TEI, alcohol and drug addiction (e.g. Brown et al., 2010), although an issue with this study was it was not on university students and was conducted in a rehabilitation centre making it difficult to generalise the results to a student

population. Smith et al., (2012) looked at TEI and mental health, although there are some issues with this study as the participant were Chinese students making this study difficult to generalise to western countries. Another issue with this study is that the main aim of the study is to investigate perfectionism and psychological outcomes using TEI mediator and did not specifically focusing on depression and anxiety. There are a small number of research studies in this area; and no research that has looked at the sub-factors of TEI in relation depression, anxiety, drug use and alcohol use in a student population. Claros and Sharma (2012) is one study that has looked at what construct of EI influence alcohol and drug use, however, the researcher used ability-EI to study these areas, which as described early is very different to TEI and cannot be generalised to TEI.

Therefore, the purpose of this study is to investigate the relationship between trait emotional intelligence (TEI) and depression, anxiety, alcohol use and drug use in university students. This current study will build on three main aspects of past research; firstly to investigate all four variables in the same study, whereas past studies have not done this before. Secondly expand on past research and focus on TEI instead of the much broader multidimensional aspects of ability or emotional intelligence. Thirdly to investigate what sub factors of TEI (Well-being, Self-control, Emotionality & Sociability) influence symptoms of depression, symptoms of anxiety, alcohol use and drug uses.

Hypotheses

H_1: *Students with higher levels of trait emotional intelligence will have fewer symptoms of depression?*

H_2: *Students with higher levels of trait emotional intelligence will have fewer symptoms of anxiety?*

H_3: *Students* with *higher levels of trait emotional intelligence will have lower levels of drug use?*

H_4: *Students with higher levels of trait emotional intelligence will have lower levels of alcohol use?*

H_5: *What factors of trait emotional intelligence significantly affect symptoms of anxiety, symptoms of depression, drug use and alcohol use?*

Methodology

Design

A within-subjects design is used, the instruments will be counterbalances. The independent variable is trait emotional intelligence and the predictors are the four factors of trait emotional intelligence Well-being, Self-control, Emotionality and Sociability. The dependent (outcome) variables are alcohol use, drug use, symptoms of depression and symptoms of anxiety.

Participants

The participants are a self-selected volunteer sample, recruited throughout the student population via student forums on the internet. All the participants (N=178) are university students, age between 18 to 60 years (M_{age} = 23.47, SD = 6.38) 125 females (70%) and 53 males (30%).

Materials

The study will use five Surveys, four for the outcome and one for the predictor divided up into global trait-EI and the four factor for trait emotional intelligence. These will be administered via qualtrics. Two instruments that this study will use to identify the participants alcohol and drug uses and two will be used to establish any self-reported symptoms of depression and anxiety.

The ***Alcohol Use Disorders Identification Test*** (AUDIT; Babor, Higgins-Biddle, Saunders & Monteiro, 2001), was developed by the WHO to study alcohol use (Babor et al., 2001). This is a self-reported measure with ten questions with eight being on a five-point scale and two being on a three-point scale. Three questions about the amount of alcohol consumed (items 1-3), three question about alcohol dependence (items 4 - 6) and four question alcohol-related harm (items 7 - 10). For example one question is *"How often do you*

have six or more drinks on one occasion?" With the responses *"Never", "Less than Monthly", "monthly", "Weekly"* and *"Daily or almost daily"* (Babor et al., 2001). Scoring ranges from 0 to 40, an extra response was added for participants that did not consume any alcohol on question 2, the first two responses on question 2 scored "0" = 0 and "1-2" = 0 the total score remained the same (See Appendix A). The cut-off scores are defined by zones, Zone I <7 indicate low risk, Zone II <15 indicate medium risk, Zone III <19 indicate high risk and Zone IV <40 would indicate severe risk (Babor, et al., 2001). De Meneses-Gaya, Zuardi, Loureiro & Crippa (2009) found that AUDIT had a good Internal consistency (α = 0.81). Reid, Fiellin & O'Connor (1999) suggested a cut-off score of 8 yielded a sensitivity of 88% and specificity of 96%.

The ***Drug Use Disorders Identification Test*** (DUDIT; Berman, Bergman, Palmstierna & Schlyter, 2005) was developed in conjunction with the Audit to investigate an individual's behaviour with drugs uses. This is a self-reported measure that asks participants about the amount of drug used and the consequences of their uses. The DUDIT has eleven questions with nine being on a five-point scale and two being on a three-point scale. For example, one question is *"How many times do you take drugs on a typical day when you use drugs?"* With the responses "*0*", "*1-2*", "*3-4*", "*5-6*" and "*7 or more*" and "*How often are you influenced heavily by drugs?"* with the responses "*Never*", "*Less often than once a month*", "*Every month*", "*Every week*" and "*Daily or almost every day*" (Berman et al., 2005). The scoring range from 0 to 44, with substance misuses indicated from >7. Berman et al., (2005) found that DUDIT has a good internal consistency (α = .80) with a Sensitivity of .90 and a Specificity of .78.

The two measures that will be used to identify symptoms of mental health are ***Generalized Anxiety Disorder 7*** (GAD-7; Spitzer, Kroenke, Williams & Löwe, 2006) is a self-reported measure used to identify symptoms of anxiety in participants. The GAD-7 consists of seven questions with four responses, for example, one question is *"Feeling nervous, anxious or on edge"* the participant has a choice of four responses "*Not at all", "Several days", "More than half the days"* and *"Nearly every day"* (Spitzer et al,, 2006). The participants answer each question based on the past two weeks of their life. The GAD-7 scores range from 0 to 21 and has a cut off score >3 for mild symptoms, >7 for moderate symptoms and >12 for severe symptoms of anxiety. Williams (2014) found that GAD-7 had a good internal consistency ($\alpha = 0.79–0.91$), with a sensitivity of 89% and specificity of 82% with a cut-off score of 10.

The second measure is the ***Patient Health Questionnaire 9*** (PHQ-9; Kroenke, Spitzer & Williams, 1999). This is a self-reported measure used to identify depressive symptoms in participants. The PHQ-9 consists of nine questions and four responses (Kroenke et al., 2001). The PHQ-9 has two factors somatic (items 3, 4, 5 and 8) and cognitive/affective (items 1, 2, 6, 7, and 9) (Rathore et al., 2014). With one of the questions being; "*Little interest or pleasure in doing things"* and the four responses are; "*Not at all", "Several days", "More than half the days"* and *"Nearly every day"* (Kroenke et al., 2001), this is ranked on a scale from zero for "*Not at all"* to three *"Nearly every day"*. The participant's answers each question based on the past two weeks of their life. The scoring for the PHQ-9 ranges from 0 to 27, and has a cut-off from >5 for mild symptoms, >10 for moderate symptoms and >15 for severe symptoms of depression (Kocalevent, Hinz & Brähler, 2013). Kroenke et al., (1999)

found the PHQ-9 had a high internal consistency (α = .86-.89) with a Sensitivity of .88 and a Specificity of .88.

The final questionnaire is used to determine the participant's trait emotional intelligence level. ***Trait Emotional Intelligence Questionnaire – Short Form*** (TEIQUE-SF; Petrides & Furnham, 2006). This is a self-report survey consisting of 30 question, 15 subscales and four factors based on a 7 item Likert scale '*1 - Completely Disagree to 7 - Completely Agree*' (Petrides, Vernon, Schermer, Ligthart, Boomsma & Veselka, 2010). The Global trait EI consists of 30 questions, the scoring range is from 30 to 210. Within these 30 questions have four factors. The four factors are 1) ***Well-being*** (Items 5, 9, 12, 20, 24 and 27) this focuses on satisfaction, hopefulness and Self-esteem, and how well the individuals feel about their future, for example, one question is *'I generally don't find life enjoyable'*. 2) ***Self-control*** (Items 4, 7, 15, 19, 22 & 30) focuses on Stress Management, Emotional control and Impulse Regulation, this is important as to whether the individual can control their emotions or whether their emotional control them, for example, one question is *'I tend to get involved in things I later wish I could get out of'*. 3) **Emotionality** (Items 1, 2, 8, 13, 16, 17, 23 & 28) focuses on an individual's ability to understand Emotional Expression, Empathy, Perception of Emotion and Relationships in themselves and others, for example, a one of the question is '*Expressing my emotions with words is not a problem for me'*. 4) **Sociability** (Items 6, 10, 11, 21, 25 & 26) focuses on the social situation and how comfortable an individual is them different kinds of social situation, for example, one question is *'I'm usually able to influence the way other people feel'*. The last four Items (question 3, 14, 18 & 29) making the total number of question to 30. These only add to measuring global trait-EI (Petrides, 2009). The higher a person scores on each subscale indicates higher levels in that

trait on that factor. The score is in three different bands for below average (1-29%), average (30-69%) and above average (70-99%).

Procedure

The participants with partaking in multiple surveys via qualtrics. The participants will first be displayed with the brief (See Appendix B); this will first give the participants a very brief overview of the study and then detail the ethics. The ethics will be the participant's right to withdrawn from the study at any point while participating or after the study has concluded. Next will be that no identifying information will be collected about the participants and all the information collected about the participants will be anonymous and will be confidential. The brief will also mention how long the data is held on to for and that all data will be kept on a password protected computer and that all data will be destroyed after the study has concluded. Furthermore, on this page the contact information will be displayed for the researcher and supervisor is the participants have any question before starting the study. The participant will be asked to enter a four digit personal pin, so if at a later date the participant chooses to have their data removed after completing the research or find out the results of the study then they can email the researcher without revealing their identity. Finally, the participant will be asked to give consent, asking them to tick several boxes to confirm that they understand the nature of the research, they have volunteered, and that the participant understands all their ethical rights. At the bottom of this page, they will be asked to press the proceed button. The second page the participants were asked for their participant information e.g. gender, age and whether they were a university student, if the participant selected no then the study would end and they were thanked for their participation. If yes they would then go on to complete the study. The participants can now complete the five surveys (DUDIT, GAD-7, PHQ-9 & AUDIT and TEIQUE-SF; See

appendix A) these will be randomised. After the surveys have been completed the debrief form will very briefly explain what the study is about (see appendix B). The debrief also reiterate the participant's ethical rights and give the participant information about the support available to them via the university counselling service, and various charities that specialise in these areas. The participant then has to submit the study by clicking the submit button at the bottom of the page. The participant will be thanked for taking part in the study.

Results

Normality of data

One hundred and ninety-three participant attempted the study, 15 participants were removed, eight due to not completion all five questionnaire and seven that were considered outliers on the DUDIT and one outlier for AUDIT (with *z* scores of +3 standard deviation from the mean), these were removed (Tabachnick & Fidell, 2007). There were no outliers for PHQ-9, GAD-7 and TEIQUE-SF. The data for AUDIT, DUDIT, PHQ-9 and GAD-7 was not normally distributed and was significant on shapiro-wilks test ($p < .05$); Shapiro-wilks can be significant in larger samples (Ghasemi & Zahediasl, 2012). The data for DUDIT (Skewness = 2.05, Kurtosis = 3.69) and AUDIT (Skewness = 1.28, Kurtosis = 1.23) were both positively skewed, these were check via the histograms. Positively skewed data is common for self-report alcohol and drug questionnaires data (Neal & Simons, 2007). The data was analysed using statistical package SPSS 22.0 for Windows.

Correlation and regression analyses were conducted on the data, to predict the relationship between Trait emotional intelligence and symptoms of depression, symptoms of anxiety, alcohol use and drug use. Table 1 shows the means and standard deviation for each dependant and the independent variable for both male and female. Participants reported that 33% had used drugs in the past year. The mean for the DUDIT indicate low levels of drug use, but when controlling for gender, males scored much higher for drug uses compared to females. With 12% of the sample scoring 8 or more indicating drug misuse based on the DUDIT recommended cut-off scores. Participants reported that 82% had used alcohol in the past year. The mean score for AUDIT is considerably higher compared to drug uses, with 21% scoring 8 or more indicating median-risk of alcohol misuse.

The participants reported that 95% had experienced symptoms of anxiety in the past two weeks. The mean score for GAD-7 indicates that participants had moderate to severe symptoms of anxiety, with 53% scoring 7 or more, with 7 being the cutoff score for moderate symptoms. Males have a higher mean score compared to females. Participant also reported that 97% had experienced symptoms of depression in the past two weeks. The mean score for PHQ-9 indicates mild symptoms of depression within the sample, with 44% scoring 10 or more indicating moderate symptoms of depression. Table 1 also indicates that males score higher on each of the dependent variables and lower on trait emotional intelligence, whereas females score lower on each of the dependant variable and higher on trait emotional intelligence. Table 1 also displays the Means and Standard Deviation for the four factors for the TEIQUE-SF, totals and controlled for gender. Females scored higher on well-being, emotionality and sociability compared to males, whereas male score higher on self-control with a tighter spread of the data for standard deviation compared to females. Internal consistency was assessed to be good as they are above .7 (Fields, 2013) these are shown in table one.

Table 1: *Means and Standard Deviation for each variable (N=178)*

	Mean (μ)			Std. Deviation (σ)			Range	α
Variable	Total	Male	Female	Total	Male	Female		
TEIQUE-SF[a]	134.59	130.89	136.16	28.76	30.67	27.90	30 -210	.92
DUDIT[b]	2.37	3.89	1.73	4.38	5.70	3.51	0 - 44	.85
AUDIT[c]	5.41	5.70	5.29	5.20	5.57	5.06	0 - 40	.82
GAD-7[d]	8.70	8.89	8.62	5.82	5.96	5.78	0 - 21	.91
PHQ-9[e]	10.65	10.64	10.65	7.38	7.52	7.34	0 - 27	.92
Well-Being	27.26	25.55	27.98	8.87	9.02	8.74	6 - 42	.90
Self-Control	24.58	24.96	24.42	6.85	6.43	7.05	6 - 42	.75
Emotionality	26.88	26.83	26.90	6.35	6.81	6.18	8 - 56	.74
Sociability	38.08	36.57	38.72	8.39	8.96	8.08	6 - 42	.75

Note: a-Trait Emotional Intelligence Questionnaire – Short Form
b-Drug Use Disorders Identification Test
c-Alcohol use disorders identification test
d-Generalized anxiety disorder-7
e-Patient Health Questionnaire-9
α - Cronbach's alpha

Pearson's *r Correlation*

Pearson's *r* correlation looked at the relationship between Global trait-EI and factors of TEIQUE-SF and symptoms of depression and symptoms of anxiety. Table 2 displays the two variables. There is a significant relationship between Global trait-EI and scores on PHQ-9 and GAD-7. It was hypothesised that higher scores on TEI predict lower levels on each of the dependant variables. The results indicate that higher scores on TEIQUE-SF were associated with lower levels of self-reported symptoms of anxiety on the GAD-7 ($r = -.62$, $p < .001$), self-reported symptoms of depression on the PHQ-9 ($r = -.68$, $p < .001$). Further analysis of the factors for TEIQUE-SF does significantly correlate with the dependant

variable indicating a significant relationship. Well-being significantly correlates with GAD-7 (r = -.64, p < .001) and PHQ-9 (r = -.74, p < .001), Self-control significantly correlates with GAD-7 (r = -.63, p < .001) and PHQ-9 (r = -.60, p < .001), Emotionality significantly correlate with GAD-7 (r = -.24, p < .001) and PHQ-9 (r = -.30, p < .001), Sociability significantly correlates with GAD-7 (r = -.40, p < .001) and PHQ-9 (r = -.42, p < .001).

Table 2: Pearson's r *Correlation matrix for GAD-7 and PHQ-9 showing the relationship between each variable* (N=178)

Variables	*TEIQUE-SF*	*GAD-7*	*PHQ-9*	Well-being	Self-control	Emotionality
TEIQUE-SF[a]	-					
GAD-7[b]	-.62***	-				
PHQ-9[c]	-.68***	.75***	-			
Well-being	.88***	-.64***	-.74***	-		
Self-control	.80***	-.63***	-.60***	66***	-	
Emotionality	.70***	-.24***	-.30***	.46***	39***	-
Sociability	.77***	-.40***	-.42***	.56***	.52***	.50***

Note: *** designates significant to P< .001 level, ** significant to P< .01 and * significant to P<.05 level at two tailed

a-Trait Emotional Intelligence Questionnaire – Short Form, b-Generalized anxiety disorder-7, c-Patient Health Questionnaire-9

Spearman's correlation

Due to the positively skewed data in the DUDIT and AUDIT sample, Spearman's correlation was carried out as this is more appropriate for skewed data (Mukaka, 2012). This was used to look at AUDIT and DUDIT in relation to Global trait-EI and the factors of TEIQUE-SF. Table 3 shows that DUDIT significantly correlates with TEIQUE-SF (r_s = -.22, p = .003). However, the relationship between TEIQUE-SF and AUDIT was non-significant (r_s = -.09, p = .25) indicating that there was no relationship between the alcohol scores and trait emotional intelligence in the student sample. Further analysis of the factors for

TEIQUE-SF does significantly correlate with the dependant variables, indicating a significant relationship. Well-being significantly correlates with DUDIT (r_s = -.27, p <.001), indicating a relationship between high levels of well-being and lower levels of drug use. Self-control significantly correlates with DUDIT (r_s = -.17, p=.02) and AUDIT (r_s = -.15, p=.05), suggesting that students low in self-control drink more and use more drugs. Emotionality significantly correlate with DUDIT (r_s = -.18, p=.02), suggesting students that have trouble managing their emotion use more drugs.

Table 3: Spearman *Correlation matrix showing DUDIT and AUDIT and the relationship between each variable* (N=178)

Variables	*TEIQUE-SF*	*DUDIT*	*AUDIT*	Well-being	Self-control	Emotionality
TEIQUE-SF[a]	-					
DUDIT[b]	-.22**	-				
AUDIT[c]	-.09	.34***	-			
Well-being	.88***	-.27***	-.04	-		
Self-control	.80***	-.17*	-.15*	66***	-	
Emotionality	.70***	-.18*	-.07	.47***	39***	-
Sociability	.77***	-.04	-.04	.57***	.56***	.48***

Note: *** designates significant to P< .001 level, ** significant to P< .01 and * significant to P<.05 level at two tailed

a-Trait Emotional Intelligence Questionnaire – Short Form, b-Drug Use Disorders Identification Test, c-Alcohol use disorders identification test.

Multiple Regression Models

Multiple regression (enter method) analyses were conducted on PHQ-9 and GAD-7, to further investigate the relationship between the factors (e.g. Well-being, Self-control, Emotionality and Sociability) of trait emotional intelligence (TEIQUE-SF) and what factors significantly predict scores on GAD-7 and PHQ-9. Model 1 (Table 4) shows the predictors for TEI and PHQ-9. The model shows that the factors of TEIQUE-SF and PHQ-9 is

significant ($F_{(4,173)} = 59.79$, $p < .001$, $R^2 = .58$), the results indicate that well-being significantly predicted depression scores (β = -.64, $t_{(177)} = -9.06$, $p < .001$), for every unit increase on the PHQ-9 score, there would be a decrease of -0.54 on the Well-being predictor. The model also shows that self-control is significant (β = -.21, $t_{(177)} = -3.13$, $p = .002$). This show for every unit increase on the PHQ-9 score, there would be a decrease of -0.23 on the Self-control predictor. However, emotionality and sociability are not significant predictors for symptoms of depression.

Model 2 (Table 4) is significant and does predicted scores on GAD-7 ($F_{(4, 173)} = 42.09$, $p < .001$, $R^2 = .49$). The results show that well-being significantly predicts scores on the GAD-7 (β = -.44, $t_{(177)} = -5.67$, $p < .001$). For every unit increase on the GAD-7 score, there would be a decrease of -0.29 on the Well-being predictor. The results also show that self-control was also a significant predictor (β = -.37, $t_{(177)} = -4.98$, $p < .001$). For every unit increase on the GAD-7 score, there would be a decrease of -0.31 on the self-control predictor. However, Emotionality and sociability are not significant predictors for symptoms of anxiety.

Table 4: Multiple regression Beta values, Standard Error and t-test for each of the predictor variables and both Dependant variable (N=178).

	Model 1				Model 2			
	B	SE *B*	β	*t*	*B*	SE *B*	β	*t*
Well-being	-.54	.06	-.64	-9.06***	-.29	.05	-.44	-5.67***
Self-control	-.23	.07	-.21	-3.13**	-.31	.06	-.37	-4.98***
Emotionality	.06	.05	.07	1.16	.07	.05	.11	1.65
Sociability	.02	.08	.01	.22	-.01	.07	-.01	-.13

Note: *** designates significant to P< .001 level, ** significant to P< .01 and * significant to P<.05
SE B - Standard. Error beta, β - Beta values,, Model 1-Patient Health Questionnaire-9, Model 2 -Generalized anxiety disorder-7.

Negative Binomial Regression Model

The data for DUDIT and AUDIT has a Negative Binomial distribution and is positively skewed, a negative binomial (NB) regressions were carried out, as this demonstrated to be the best fit for the data (Neal & Simons, 2007). All variables were simultaneously entered into the model. The incidence rate ratios (IRR) and significance are reported. IRR are the exponentiated regression coefficients (Cox & Bates, 2011) and can be interpreted as a one unit increase in the factors of TEIQUE-SF (predictor) representing an increase in DUDIT (outcome variable). If the IRR is less than one this represents a decrease in the outcome variable. Model 3 (Table 5) for the DUDIT show that Sociability is a significant predictor of drug use (IRR=1.09, $p<.001$), for every increase in the predictor there would be a 9 percent increase in the DUDIT score, Suggesting students that are more sociable engage in more drug use. Well-being was also a significant predictor of drug use (IRR= .935, $p<.001$), indicating that students low in well-being have higher levels of drug use. Emotionality was also a significant predictor (IRR= .963, $p=.004$), Suggesting that emotion can have an effect on drug use. However, self-control was not significant predictor. Model 4 (table 5) for the AUDIT was not a significant, showing that none of the predictors significantly predicted the scores for alcohol use.

Table 5: Shows the negative binomial regression models for the four predictors (N=178)

	Model 3				Model 4			
	B	SE	IRR	95% CI	*B*	SE	IRR	95% CI
Well-being	-.07	.015	.94***	.91 - .96	.01	.01	1.01	.98 - 1.04
Self-control	.00	.018	1.00	.96 - 1.03	-.03	.02	.97	.94 - 1.00
Emotionality	-.04	.013	.96**	.94 - .99	-.01	.01	.99	.97 - 1.01
Sociability	.08	.020	1.09***	1.04 - 1.13	.01	.02	1.01	.98 - 1.05

Note: *** designates significant to P< .001 level and ** significant to P< .01,
β - Beta values, SE - Standard. Error, IRR - incidence rate ratios, 95% CI - 95% confidence interval, NB - Negative Binomial, λ- Poisson, Model 3 - Drug Use Disorders Identification Test and Model 4 - Alcohol use disorders identification test.

Discussion

The purpose of this study was to investigate the relationship between trait emotional intelligence and symptoms of depression, symptoms of anxiety, drug use and alcohol use in a student sample. Predicting that students that scored high on trait emotional intelligence would significantly report fewer symptoms of depression and anxiety, less drug use and less alcohol use. The present study also looked at what factors of TEIQUE-SF (e.g. Well-being, Self-control, Emotionality & Sociability) significantly affect scores on PHQ-9, GAD-7, AUDIT and DUDIT.

The results for the bivariate correlations found that there was a significant relationship between trait emotional intelligence and symptoms of depression, symptoms of anxiety and drug use. Therefore, hypothesis H_1 can be accepted as students with higher levels of trait emotional intelligence have fewer symptoms of depression (Table 2). The second hypothesis H_2 can also be accepted, as student with higher levels of trait emotional intelligence have fewer symptoms of anxiety (Table 2). The third hypothesis H_3 can also be accepted as students with higher levels of trait emotional intelligence reported less drug use (Table 3). However, H_4 can be rejected as there was no significant relationship found between trait emotional intelligence and alcohol uses in the student sample (Table 3).

The final hypothesis H_5 looked at the relationship between the factors (e.g. Well-being, Self-control, Emotionality & Sociability) of TEIQUE-SF and PHQ-9, GAD-7, DUDIT and AUDIT. The findings show that higher levels of well-being significantly predict fewer symptoms of depression, anxiety and drug use. Self-control significantly predicts fewer symptoms of depression and anxiety. However, self-control does significantly correlate with alcohol and drug use but when examining the relationship further self-control does not predict alcohol or drug use. The finding shows that higher levels of sociability significantly

predict higher levels of drug use. Emotionality does correlate significantly with depression, anxiety and drug use and when examining this relationship closer, higher levels of emotionality significantly predicts lower levels of drug use but not symptoms of depression or anxiety.

Depression & Anxiety

The present study does support what past research has found, that higher levels of TEI have a significant relationship with lower levels of mental health issues. This, in turn, may also act as a protective factor against mental health problems (E.g. Davis & Humphreys, 2012; Zeidner, Matthews & Roberts, 2009). The results of the present study were similar to what Davis and Humphreys (2012) found that high levels of TEI are associated with lower levels of mental illness, supporting their finding. This study also supports what smith et al., (2015) found that high levels of TEI are associated with lower levels of depression and anxiety. Connor and Slear (2009) found that higher levels of anxiety were associated with low levels of emotional intelligence. This suggests that TEI is a key factor in the mental health of students. Further investigation of the factors of TEI found what factors significantly affect mental health in the student sample, extending what past research has done, by only looking at the overall score on EI or TEI. Well-being significantly predicts fewer symptoms of depression. This adds support to research that found individuals that suffer from depression had lower levels of well-being compared to a non-depressed sample (Edmondson & MacLeod, 2015). Well-being was also found to predict fewer symptoms of anxiety, supporting past research that found students with higher levels of well-being reported fewer symptoms of social anxiety (Topham & Moller, 2011). Self-control was also found to be a significant predictor for fewer symptoms of depression; low levels of self-control have been found to predict higher levels of depression (DeWall, Gilman, Sharif, Carboni & Rice, 2012).

It was also found that lower levels of self-control was a significant predictor for symptoms of anxiety, students with lower levels of self-control reported higher levels of anxiety (Blackhart, Williamson & Nelson, 2015). However, where past research has found a negative relationship between sociability and depression, i.e. students suffering from depression participate in fewer social activities compared to students with fewer symptoms of depression (Blanco & Barnett, 2014). In the present study the correlation found a significant relationship between depression and sociability, however, sociability does not predict depression scores, contradicting what past research has found.

Drug & Alcohol use

The findings from the present study do support that low levels of emotional intelligence are associated with higher levels of drug use as found in past research (e.g. Riley & Schutte, 2003). However, this study found contradicting results regarding alcohol use, as TEI scores do not predict alcohol use (Table 3), contradicting what other research has found (e.g. Schutte, Malouff & Hine, 2011; Riley & Schutte, 2003). Further analysis of the data found that the factors of TEI also do not significantly predict alcohol scores. Well-being was shown to be a significant predictor for drug use, indicating that higher levels of well-being predicted lower levels of drug use. This supports what Routledge and Visser (2007) found that individuals who used drugs had lower levels of well-being, also, this was conducted on adolescents making it harder to generalise to an older sample but it does still support what has been found in the present study. Emotionality is also a significant predictor for lower levels of drug; it was found that students with negative emotions also had a risk of drug use (James & Taylor, 2007). Higher levels of Self-control significantly correlate with lower levels of alcohol use and drug use. However, this leads to contradicting in the literature as there is evidence to support this with research that found lack of self-control can lead to drinking

more alcohol (Foster, Young & Bärnighausen, 2014) and high levels of self-control significantly correlate with lower levels of drug use (Pokhrel, Sussman, Rohrbach & Sun, 2007). However, it is suggested by these researchers that it is the low levels of self-control that leaders to drug and alcohol use, whereas, self-control in the present study does not predict drug or alcohol use contradicting what other research has found. However, other research found that opportunity and peers may mediate the relationship between self-control and substance use (Ford & Blumenstein, 2012). Sociability was also found to be a significant predictor with higher levels of sociability predicting high levels of drug use. This relationship was also found in a study that looked at shyness and sociability and their relationship with substance misuse (Santesso, Schmidt & Fox, 2004). Two past studies have investigated alcohol problems and trait emotional intelligence; one was conducted at a rehabilitation centre focus on individuals with addiction problem, where they found a significant relationship between low levels of TEI and alcohol problem (e.g. Brown et al., 2010), however, this result may be expected due to the environment that the research is being conducted. The other was conducted on students where a significant result was found (Austin, Saklofske & Egan, 2005). A meta-analysis found a negative correlation between EI and alcohol use problems ($r = -.32$), however, when looking at consumption of alcohol use and EI this relationship became weaker ($r = -.10$) (Peterson, Malouff & Thorsteinsson, 2011), with the relationship in the present study found to be ($rs = -.09$). This suggests that maybe TEI is a better predictor of problem alcohol use rather than just consumption of alcohol, as many of the students in the present study reported lower levels of alcohol use ($M=5.41$), below that of hazardous use. Suggesting that low levels of alcohol use has no or little adverse effects on TEI, compared to high levels of use that can have negative consequences for TEI (e.g. Brown et al., 2010).

Implications to TEI

This study does provide support for trait emotional intelligence as a valid measure for the risk of mental illness and substance use. Although, this research does support what other research has found in regards to high levels of alcohol uses and possibility of alcohol misuse in the student sample (e.g. Heather et al., 2011). However, caution need to be made when interpreting these results, as low levels of TEI may not be the only reason why individual have higher a risk or high levels of mental health issues or substance use. A whole host of other factors may contribute to why an individual or student succumbs to these problems for example family history, home life (Repetti, Taylor & Seeman, 2002) working life (Wang, 2006), academic pressure (Dusselier, Dunn, Wang, Shelley iI & Whalen, 2005) and peer pressure (Beal, Ausiello & Perrin, 2001) to name a few. These may all be significant risk factors that contribute to developing depression, anxiety, alcohol misuse and drug use. But TEI may be a protective factor against why some individuals develop these problems (E.g. Davis & Humphreys, 2012) despite having these risk factors. However, what this study does show is the link between high levels of TEI and low levels of depression, anxiety and drug use and other psychological factors, such as well-being and self-control being protective factors against mental health and self-control and emotionality being a protective factor against drug use or misuse.

Real World Application

This study shows that there is a significant relationship between TEI and mental health and drug use. Furthermore, this study also shows based on the responses from the student sample the potential risk to a large portion of the students in this sample and the student population as a whole. What this suggests is the need for further action by universities

and student unions to intervene and support students that have issues with mental health and/or substance use problem. By warning new students starting as well as current students about the potential risk of developing mental health problems and the increased risk of high levels of drug and alcohol use while at university. Intervention programmes should be an important part of the induction process for all new students starting university, raising the awareness of possible issues that can arise. But more importantly making students more aware of the support that is available from the university and outside organisation (NHS & charities), without support these issues can affect academic performance for students (Dusselier et al., 2005). Conley, Durlak and Dickson (2013) conducted a review of 83 intervention for mental health for university students, they found that intervention is effective for students and can have a long-term positive effect on students well-being including reductions in stress, anxiety and depression between the intervention and the follow-up.

One aspect that can be considered in is including TEI or EI training into these intervention programmes for new students starting university. Although there is a minimal amount of research looking at these types of intervention programmes for university students. Bond and Manser (2009) is one of the exceptions, they gave students EI training and compared the result a control group of students, They found that students who received the training were higher in self-awareness and were able to remain more emotionally stable compared to students that did not do the course.

Limitations and Future Research

One limitation of this research is using self-report scales as this can lead to a number of issues such as social desirability bias (Yoshino & Kato, 1995), confusion in the wording of the questionnaire and extreme responses can all lead to issues with self-report data (Paulhus & Vazire, 2007). However, to overcome some of these each shorter scales were used, as

researchers have found individuals are less apprehensive about completing shorter scales compared to longer ones (Chen, Huang, Chang & Chung, 2006) and less question are needed. However, this may lead to a less accurate picture of the sample as longer questionnaires would have led to more data being collected and allowed for deeper analysis to understand student motivation and their relationship to these issues. Future direction could focus on and compare data from both student and non-student participants as with these issues (depression, anxiety, alcohol use & drug use) are amplified (i.e. higher compared to non-students) compared to that of the general population, so being able to examine that relationship to see if there is still a relationship between higher levels of TEI and depression, anxiety and drug use. Secondly more research needs to be done to understand the factors of TEI and their relationship with other aspects of life for example school or work performance, as research has shown a relationship between AEI and work (O'Boyle, Humphrey, Pollack, Hawver & Story, 2011) and academic performance (Chew, Zain & Hassan, 2013) but investigating TEI and what aspects of TEI has a direct or indirect influence over these.

In summary, understanding why some student copes better than others at university is important, as without an ability to cope with the pressure, can lead to a number of issues (E.g. depression, anxiety, drug use, alcohol use and poor academic performance). This study has shown that high levels of TEI significantly relate to lower levels of mental health and drug use, but could also possibly be one of the reasons why some students cope better than others. Also this study has investigated what aspects of TEI significant affect depression, anxiety and drug use. TEI could be considered a protective factor against developing these issues, despite the pressures of university. However, the complexity of all the different factors that can affect these problems should not be underestimated. This study also highlights the risk to many students and the need to support and increase awareness of the possible risk to

new and present and possibly incorporating TEI training into the student induction for all new students starting university before issues can begin to develop.

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Appendix A

Questionnaires Used

AUDIT

The Alcohol Use Disorders Identification Test: Self-Report Version

PATIENT: Because alcohol use can affect your health and can interfere with certain medications and treatments, it is important that we ask some questions about your use of alcohol. Your answers will remain confidential so please be honest. Place an X in one box that best describes your answer to each question.

	Questions	0	1	2	3	4	
1.	How often do you have a drink containing alcohol?	Never	Monthly or less	2-4 times a month	2-3 times a week	4 or more times a week	
2.	How many drinks containing alcohol do you have on a typical day when you are drinking?	0 / 1 or 2	3 or 4	3 or 4	7 to 9	10 or more	
3.	How often do you have six or more drinks on one occasion?	Never	Less than monthly	Monthly	Weekly	Daily or almost daily	
4.	How often during the last year have you found that you were not able to stop drinking once you had started?	Never	Less than monthly	Monthly	Weekly	Daily or almost daily	
5.	How often during the last year have you failed to do what was normally expected of you because of drinking?	Never	Less than monthly	Monthly	Weekly	Daily or almost daily	
6.	How often during the last year have you needed a first drink have you needed a first drink going after a heavy drinking session?	Never	Less than monthly	Monthly	Weekly	Daily or almost daily	

7.	How often during the last year have you had a feeling of guilt or remorse after drinking?	Never	Less than monthly	Monthly	Weekly	Daily or almost daily	
8.	How often during the last year have you been unable to remember what happened the night before because of your drinking?	Never	Less than monthly	Monthly	Weekly	Daily or almost daily	
9.	Have you or someone else been injured because of your drinking?	No		Yes, but not in the last year		Yes, during the last year	
10.	Has a relative, friend, doctor, or other health care worker been concerned about your drinking or suggested you cut down?	No		Yes, but not in the last year		Yes, during the last year	
						TOTAL	

DUDIT

DUDIT Drug Use Disorders Identification Test

Here are a few questions about drugs. Please answer as correctly and honestly as possible by indicating which answer is right for you.

	Questions	0	1	2	3	4
1.	How often do you use drugs other than alcohol?	Never	Once a month or less often	2-4 times a month	2-3 times a week	4 times a week or more often
2.	Do you use more than one type of drug on the same occasion?	Never	Less than monthly	Monthly	Weekly	Daily or almost daily
3.	How many times do you take drugs on a typical day when you use drugs?	0	1 - 2	3 - 4	5 - 6	7 or more

4.	How often are you influenced heavily by drugs?	Never	Less often than once a month	Every month	Every week	Daily or almost every day
5.	Over the past year, have you felt that your longing for drugs was so strong that you could not resist it?	Never	Less often than once a month	Every month	Every week	Daily or almost every day
6.	Has it happened, over the past year, that you have not been able to stop taking drugs once you started?	Never	Less often than once a month	Every month	Every week	Daily or almost every day
7.	How often over the past year have you taken drugs and then neglected to do something you should have done?	Never	Less often than once a month	Every month	Every week	Daily or almost daily
8.	How often over the past year have you needed to take a drug the morning after heavy drug use the day before?	Never	Less than monthly	Every month	Every week	Daily or almost daily
9.	How often over the past year have you had guilt feelings or a bad conscience because you used drugs?	No	Less than monthly	Every month	Every week	Daily or almost daily
10.	Have you or anyone else been hurt (mentally or physically) because you used drugs?	No		Yes, but not over the past year		Yes, over the past year
11.	Has a relative or a friend, a doctor or a nurse, or anyone else, been worried about your drug use or said to you that you should stop using drugs?	No		Yes, but not over the past year		Yes, over the past year

GAD-7

GAD-7

Over the last 2 weeks, how often have you been bothered by any of the following problems?		Not at all	Several days	More than half the days	Nearly every day
1	Feeling nervous, anxious or on edge	0	1	2	3
2	Not being able to stop or control worrying	0	1	2	3
3	Worrying too much about different things	0	1	2	3
4	Trouble relaxing	0	1	2	3
5	Being so restless that it is hard to sit still	0	1	2	3
6	Becoming easily annoyed or irritable	0	1	2	3
7	Feeling afraid as if something awful might happen	0	1	2	3
		A12 – GAD7 total score			

PHQ-9

PHQ- 9

Over the last 2 weeks, how often have you been bothered by any of the following problems?		Not at all	Several days	More than half the days	Nearly every day
1	Little interest or pleasure in doing things	0	1	2	3
2	Feeling down, depressed, or hopeless	0	1	2	3
3	Trouble falling or staying asleep, or sleeping too much	0	1	2	3
4	Feeling tired or having little energy	0	1	2	3

5	Poor appetite or overeating	0	1	2	3
6	Feeling bad about yourself — or that you are a failure or have let yourself or your family down	0	1	2	3
7	Trouble concentrating on things, such as reading the newspaper or watching television	0	1	2	3
8	Moving or speaking so slowly that other people could have noticed? Or the opposite — being so fidgety or restless that you have been moving around a lot more than usual	0	1	2	3
9	Thoughts that you would be better off dead or of hurting yourself in some way	0	1	2	3
		A11 – PHQ9 total score			

TEIQUE-SF

Please answer each statement below by indicating the number that best reflects your degree of agreement or disagreement with that statement. Do not think too long about the exact meaning of the statements. Work quickly and try to answer as accurately as possible. There are no right or wrong answers. There are seven possible responses to each statement ranging from 'Completely Disagree' (number 1) to 'Completely Agree' (number 7).							
	1	2	3	4	5	6	7
Expressing my emotions with words is not a problem for me.							
I often find it difficult to see things from another person's viewpoint.							
On the whole, I'm a highly motivated person.							
I usually find it difficult to regulate my emotions.							
I generally don't find life enjoyable.							
I can deal effectively with people.							
I tend to change my mind frequently.							
Many times, I can't figure out what emotion I'm feeling.							
I feel that I have a number of good qualities.							
I often find it difficult to stand up for my rights.							
I'm usually able to influence the way other people feel.							

On the whole, I have a gloomy perspective on most things.							
Those close to me often complain that I don't treat them right.							
I often find it difficult to adjust my life according to the circumstances.							
On the whole, I'm able to deal with stress.							
I often find it difficult to show my affection to those close to me.							
I'm normally able to "get into someone's shoes" and experience their emotions							
I normally find it difficult to keep myself motivated.							
I'm usually able to find ways to control my emotions when I want to.							
On the whole, I'm pleased with my life.							
I would describe myself as a good negotiator.							
I tend to get involved in things I later wish I could get out of.							
I often pause and think about my feelings.							
I believe I'm full of personal strengths.							
I tend to "back down" even if I know I'm right.							
I don't seem to have any power at all over other people's feelings.							
I generally believe that things will work out fine in my life.							
I find it difficult to bond well even with those close to me.							
Generally, I'm able to adapt to new environments.							
Others admire me for being relaxed.							

Appendix B

Department of Psychology Consent Form

PLEASE READ THIS FORM CAREFULLY YOU NEED TO BE 18 AND OVER TO GIVE YOUR CONSENT TO PARTICIPATE IN THIS RESEARCH

Hello, my name is James and I am interested in studying how emotional intelligence affects certain behaviours on students.

The purpose of the study: Is to investigate trait emotional intelligence and the effect it has on symptoms of depression, symptoms of anxiety, alcohol misuse and drug use

Method of research: If you agree to be in this study, we will ask you to complete short online surveys that include questions about your feelings and substance use and there also will be basic demographic questions (e.g., age, gender). This research should take between 15 to 25 minutes to complete.

Voluntary Nature of the Study: Your participation in this study is entirely voluntary. You are under no obligation to take part and have the right to withdraw from the research at anytime,

you can do this by exiting the browser at any point or by contacting myself (James.Weller@study.beds.ac.uk) or my supervisor (Lynne.Wood@beds.ac.uk). You have the right to have your data remove from the study at any time you wish, even after you have finished participating in the study.

Confidentiality: All of your responses will be completely confidential and anonymous. This means that no identifying data can be linked back to you the participant. All data will be stored electronically on a password protected computer and will be destroyed.

Department of Psychology Debrief Form

PLEASE REMEMBER TO PRESS THE SUBMIT BUTTON AT THE BOTTOM OF THE PAGE

The study that you have just completed is to identify whether there is a link between emotional intelligence and mood and/or substance use.

I would like to remind you of your rights as a participant, All of your responses are completely confidential and anonymous. You have the right to withdraw from the study at any time. All of your data collected contains no identifying personal information.

If in the future you change your mind and would not like to participate in the research then please e-mail me or my supervisor on one of the e-mail addresses provided. Ensuring you

include your four digit identification number, so your data can be removed. If you would like to know the overall results from the research then these can also be sent to you via e-mail. If you have any further question then please contact me or my supervisor.

Researcher: James Weller (James.Weller@study.beds.ac.uk)

Supervisor: Dr Lynne Wood (Lynne.Wood@beds.ac.uk)

If after you have completed this questionnaire you feel that you would like to talk to someone about your feelings or in relation to substances use then these websites or organisations may be useful (students of the university of Bedfordshire may use the university's free counselling service)

The Student Counselling Service The Campus Centre University Square Luton LU1 3JU 01582 489338 Email: counselling@beds.ac.uk	University of Bedfordshire
Mind 15-19 Broadway, Stratford, London E15 4BQ 0300 123 3393 http://www.mind.org.uk/ info@mind.org.uk	mind for better mental health

Addaction 67-69 Cowcross Street London EC1M 6PU 020 7251 5860 http://www.addaction.org.uk/ info@addaction.org.uk	addaction
Adfam 25 Corsham Street London N1 6DR 020 7553 7640 www.adfam.org.uk admin@adfam.org.uk	Adfam Families, drugs and alcohol