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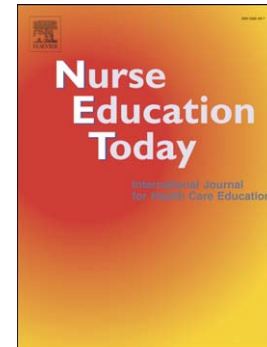
Emotional intelligence and affective events in nurse education: A narrative review

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## EMOTIONAL INTELLIGENCE AND AFFECTIVE EVENTS IN NURSE EDUCATION: A NARRATIVE

## REVIEW

**ABSTRACT**

**Objective:** To investigate the current state of knowledge about emotional intelligence and affective events that arise during nursing students' clinical placement experiences.

**Design:** Narrative literature review.

**Data sources:** CINAHL, MEDLINE, PsycINFO, Scopus, Web of Science, ERIC and APAIS-Health databases published in English between 1990-2016.

**Review methods:** Data extraction from and constant comparative analysis of ten (10) research articles.

**Results:** We found four main themes: (1) emotional intelligence buffers stress; (2) emotional intelligence reduces anxiety associated with end of life care; (3) emotional intelligence promotes effective communication; and (4) emotional intelligence improves nursing performance.

**Conclusions:** The articles we analysed adopted a variety of emotional intelligence models. Using the Ashkanasy and Daus "three-stream" taxonomy (Stream 1: ability models; 2: self-report; 3: mixed models), we found that Stream 2 self-report measures were the most popular followed by Stream 3 mixed model measures. None of the studies we surveyed used the Stream 1 approach. Findings nonetheless indicated that emotional intelligence was important in maintaining physical and psychological well-being. We concluded that developing emotional intelligence should be a useful adjunct to improve academic and clinical performance and to

reduce the risk of emotional distress during clinical placement experiences. We call for more consistency in the use of emotional intelligence tests as a means to create an empirical evidence base in the field of nurse education.

Keywords: attrition; emotional intelligence; students; nursing; emotion; stress; affect.

## **BACKGROUND**

International concern about the predicted shortage of nurses into the next decade has increased the focus on retaining nursing students in their programs of education. In this regard, Andrew et al. (2008) and Wilson et al. (2011) identified that nursing students who struggle to manage the effects of emotional engagement are more likely to discontinue their studies. The presence of stressors associated with developing academic and technical expertise, work/life balance and financial pressures has been well described in the attrition/retention literature (Eick et al., 2012). While Bachelor of Nursing Degree students are expected to undertake professional practice experiences during their program, research (Beck, 1993; Farrington, 1997) has shown that stressors arising from emotional engagement during clinical placement experiences (CPE) cause emotional distress.

Learning to be a nurse is stressful and research has shown that nursing students find balancing academic and financial stressors with family/work life difficult (Eick et al., 2012). Moreover, high levels of interpersonal skills are needed to manage the demands of compassionate care during the mandatory clinical placements undertaken by nursing students (Rankin, 2013). While the value of emotion is well recognized in the field of workplace behaviour (Ashkanasy and Humphrey, 2011), the effects of emotion during CPE have only recently become a focus of research attention (Arieli, 2013; Jack and Wibberley, 2014). In the search to understand emotional engagement in nursing practice, scholars have

noted that the value of emotion might be made explicit by using a framework of emotional intelligence (Beauvais et al., 2011; Rankin, 2013). Emotional intelligence (EI) is generally described as the ability to manage own and others' emotions to guide thoughts and actions (Mayer et al., 2008). Specifically, EI includes the ability to perceive, to interpret, to generate and to understand emotions (Mayer and Salovey, 1997). Additionally, EI may help individuals cope with emotional demands thereby promoting physical and psychological wellbeing (Mayer et al., 2008). Thus, we sought in the present review to examine the current state of knowledge surrounding emotional engagement and EI in the context of CPEs.

Despite scientific evidence that EI contributes to success and overall well-being, there nonetheless remains ongoing debate over the usefulness of EI (e.g., see Antonakis et al., 2009). More importantly, scholarly argument continues around the issue of whether EI exists as a stand-alone construct that is separate from personality traits (Ashkanasy and Daus, 2005). In discussing the effects of emotional engagement, we adopt the term "affective event" as defined by Weiss and Cropanzano (1996) to describe a situation that causes an emotional stress response during CPEs. We sought in this review to examine current theories of EI and, in particular, how measures have been used in the CPE context. Over the last decade, there has been an international trend to incorporate the elements of compassion and empathy as key performance indicators for nursing competence (Canadian Nurses Association, 2008; Nursing and Midwifery Board of Australia, 2013; Nursing and Midwifery Council, 2015). Additionally, following investigation of care standards, Francis (2013) highlighted the need for nursing students to sustain compassionate emotional engagement as essential to improve quality in patient care. Cassell (2002) explains that compassion is related to empathy and sympathy, all of which invoke feelings of

connectedness to others. Moreover, compassion in nursing practice implies a need for emotional engagement between the nurse and the patient. Nevertheless, these requirements present a challenge in nursing programs to accommodate for the negative effects of emotional distress (Arieli, 2013). The emotional suppression types of coping style discussed by Menzies (1960) continue to resonate in the experiences of nursing students more than fifty years later. Covert rules of nursing practice remain, for example; advice not to become emotionally involved with patients (Maben et al., 2006).

There is continuing interest in the value of EI to nursing practice and recommendations made that the construct be included in nurse education programs (Beauvais et al., 2014; Codier and Odell, 2014). The requirement for compassionate care has led to an increase in research activity about the potential value of EI in nurses and nursing students (Benson et al., 2012; Rankin, 2013). In addition, there is evidence that higher EI is linked to clinical performance and quality patient care (Beauvais et al., 2011; Rankin, 2013). Despite this interest, the variety of EI measures adopted makes systematic review or meta-analysis problematic. In the next section therefore we provide an overview of measures and models of EI to support the need for consistency.

### **EMOTIONAL INTELLIGENCE: CONCEPT AND CONTROVERSY**

As Cherniss (2010) points out, EI is based in three key concepts. First, emotions are an important part of life. Second, the way that individuals perceive and manage emotions differs. Third, emotions contribute to overall ways of coping and wellbeing in all areas of life (Cherniss, 2010). There is also considerable support for EI in personal and work-life success, although theoretical variation has made a unique definition difficult (Ashkanasy and Daus, 2005). There are two issues of conflict surrounding EI. The first is whether the construct

represents ability to reason about emotion or whether it is more appropriately cast as a personality trait. The second is controversy surrounding measurement: whether EI can be measured using self-report, or whether an IQ-style measure of EI ability is needed. As a consequence of these issues, widely discrepant measures of EI are currently in use, and correlation between them usually so low that concerns have been raised as to whether the tests measure the same construct (Brackett and Mayer, 2003). To enable scholars to differentiate more clearly between the different theoretical views of EI, Ashkanasy and Daus (2005) outlined three approaches to measurement of EI, which they refer to as three “streams”.

#### Stream 1: Ability measures

The ability model of EI (ABEI) is based on the Mayer Salovey Caruso Emotional Intelligence Test (MSCEIT) and is a performance measure. The MSCEIT today is generally seen to provide the most valid measure of EI and has the least overlap with measures of personality (Joseph et al., 2015; Mayer et al., 2008). Nonetheless, several recent additions to ABEI represent attempts to improve psychometric qualities of EI measures by using existing theories of emotion recognition (Cherniss, 2010). These include Nowicki and Duke (1994) Diagnostic Analysis of Nonverbal Accuracy (DANVA), Matsumoto et al. (2000) Japanese and Caucasian Brief Affect Recognition Test (JACBART), Scherer and Scherer (2011) Emotion Recognition Index (ERI) and Bänziger, Grandjean and Scherer (2009) Multimodal Emotion Recognition Test (MERT). All of the emotion recognition ability tests use facial expressions; the MERT is the only one to use audio-visual depictions of emotion stimuli. A simplified number of emotions and responses in the emotional recognition ability tests has been identified as a limitation, as emotion differentiation between individuals is more difficult. In our review,

however, we did not identify any research articles with an affective events focus that adopted either an ABEI measure or one of the newer emotion recognition tests in nurse education. A further limitation is that ABEI measures appear to be correlated with measures of general intelligence (O'Boyle et al., 2011).

Situational Judgement Tests (SJT) represent another form of ability test and have been developed by MacCann and Roberts (2008), Mortillaro, Schlegel, & Rotondi (2015), Nelis et al. (2011) and Sharma et al. (2013). SJT's are scenario-based tests where respondents are presented with descriptions of situations and asked to choose the most appropriate response from a range of alternatives. An advantage of the STJ lies in the ability to construct emotion-based scenarios that are relevant to specific domains. The Situational Test of Emotion Management (STEM) and Situational Model of Emotional Understanding (STEU) developed by MacCann and Roberts (2008) represent alternative higher order tests similar to the understanding and management branches of the MSCEIT.

Schlegel et al. (2014) developed the Geneva Emotion Recognition Test (GERT), which covers a wide range of emotions and uses Item Response Theory (IRT). The GERT contains short video clips of 14 emotions, of which six (6) are positive and responses are either correct or incorrect. Mortillaro et al. (2015) subsequently developed the Geneva Emotional Competence Test (GECO), which is based in turn on the GERT. The application of multi-modal techniques, using different performers, aims to capture a broader range of emotions than the existing tests of emotion recognition. Recent publication of another ability based test; Smieja et al. (2014) Test of Emotional Intelligence (TIE), has also shown reliability ( $r=.88$ ) and moderate validity when compared with other EI tests. Similar to the MSCEIT, TIE scoring is based on expert judgment and was developed as an alternative ability model. The tests authors claimed that the TIE was independent of personality dimensions as measured



by NEO-PI-R (Costa Jr and McCrae, 1992). In summary ABEI construes EI as an ability or form of intelligence as defined by 'the ability to carry out accurate reasoning about emotions and the ability to use emotions and emotional knowledge to enhance thought' (Mayer et al., 2008, p.511).

### Stream 2: Self report measures

Stream 2 measures are linked to the ABEI but use self/peer report. These instruments include for example; the Multi Branch Emotional Intelligence Scale (MEIS) developed by Mayer et al. (1999) and the Workgroup Emotional Intelligence Profile developed by Jordan et al. (2002). Disadvantages of self-report measures include a risk of faking, respondent concern over social desirability, or the individual may lack awareness of their own emotion responses (Cherniss, 2010). Mayer et al. (1999) originally developed the Multi Factor Emotional Intelligence Scale (MEIS). This test assessed EI by measuring correct or incorrect responses to emotional problems. Other popular self-report measures have been used to assess or predict work performance include the Schutte Emotional Intelligence Scale (SEIS) developed by (Schutte et al., 1998) which is based on the Mayer, Salovey Caruso four-branch model. Although the SEIS has been used in number of studies, Brackett and Mayer (2003) expressed concerns about the tests associations with other personality measures. For example; the NEO-PI-R (Costa Jr and McCrae, 1992) which assesses Neuroticism, Extraversion, Openness to Experience, Agreeableness and Conscientiousness. Jordan et al. (2002) developed the WEIP (Workgroup Emotional Intelligence Profile) for application to workplace teams. Jordan and his colleagues reported that the WEIP has convergent validity with EI scales at that time and predicted team performance. The WLEIS (Wong Law Emotional Intelligence Scale; Wong, 2002) is another self-report measure that is

based on the four-branch model that has been used to measure performance. These scales lack context-specific scenarios and in this regard there is a need to differentiate tests for particular work roles and occupations. In summary, Stream 2 measures are based on the ability model of EI but use self/peer report about emotions rather than testing performance via tasks and scenarios. The Trait Meta Mood Scale (Salovey et al., 1995) was adopted by seven of the studies included in this review and the SEIS (Schutte et al., 1998) accounted for two further studies that met the inclusion criteria.

### Stream 3: Mixed model measurement

The third approach, (Stream 3) is known as the “mixed model” and measures combine elements of personality and traits not included in the original Mayer and Salovey (1997) ability concept. Mixed models of EI measure a range of competencies, such as - personality and emotion regulation skills (Petrides and Furnham, 2003). Mayer, Roberts and Barsade, (2008) argue that some of the constructs found in mixed model measurement tests do not measure either emotional reasoning or emotional knowledge. As such, Trait EI theory views EI as a mixture of traits and personality variables rather than a type of intelligence (Matthews et al., 2004). Proponents of the mixed model approach assert that EI is a mixture of personality traits and competencies, which are used to perceive and manage relationships (Goleman, 1995). Ashkanasy and Daus (2005) are particularly critical of Stream 3 models, arguing that they diverge from the core constructs in EI and correlate strongly with measures of personality. Similarly, Bar-On (2006) asserts that his newly developed Emotional-Social Intelligence Test (ESI) is a ‘multi-factorial array of interrelated emotional and social competencies, skills and facilitators that influence one’s ability to recognize, understand and manage emotions’ (p. 22).

Notwithstanding this, and despite their divergence from the Mayer and Salovey (1997) definition of EI, there is evidence mixed models that include measures of traits and personality are better predictors of wellbeing than the Stream 1 ABEI measures (Mikolajczak et al., 2007; Petrides and Furnham, 2003). To summarise, Stream 3 measures include personality and traits that were not included in the original Mayer and Salovey (1997) ability concept. One study that adopted the mixed model described by Goleman et al. (2002) met the inclusion criteria for this review. Note, however, that Ashkanasy and Daus (2005) argue that the predictive success of these measures is most likely a reflection of their correlation with personality. In a nutshell, over the last decade, scholars argue that EI may be better understood by differentiating between the various models and theoretical underpinnings rather than by comparing the various tests (Ashkanasy and Daus, 2005; Cherniss, 2010). Having reviewed the existing conceptualisations of EI, we next examine the literature surrounding the effects of EI on the way that nursing students perceive and manage affective events during CPEs. In particular, our driving research question is: *What is the current state of knowledge surrounding EI and affective events arising during clinical placement experiences?*

## **METHOD**

We adopted the integrative review methodology described by Whitemore and Knafel (2005) to synthesise study methods and results relating to EI, emotional engagement and management of affective events in nursing students. This method allows a systematic approach to extend the knowledge base surrounding EI in the context of clinical placement experiences.

### Data sources

We searched the CINAHL, MEDLINE, PsycINFO, Scopus, Web of Science, ERIC and APAIS-Health databases using the following keywords: (“emotional intelligence”) and (nurs\*), (student\*), (emotion\*), (\*stress), (cop\*), (affect\*). We used these key words in combination with each other and in truncated form (Greenhalgh and Peacock, 2005). Finally, we employed a snowball method to search for articles not identified in the initial search. In addition, a search of grey literature identified no new sources of information.

### Inclusion and exclusion

We limited the search to articles published in the English language between 1990 and 2016. We retrieved articles that specifically related to EI, students, emotional engagement and management of affective events; and excluded articles that focused on nursing management, leadership or postgraduate nursing. Articles were also excluded if they focused on EI training in nurse education (see Figure 1).

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Insert Figure 1 about here

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### Screening

We downloaded articles identified as relevant using proprietary referencing software. Two researchers reviewed the abstracts for quantitative, qualitative, theses and theoretical articles and those that met the inclusion criteria were printed and read in full. Screening of the articles began with examination of methodology, EI model used and variables measured. Only ten articles met the inclusion criteria therefore the researchers included all articles in the review.

### Data analysis

Analysis of the articles began with examination of methodology, keywords, construct and variables measured. The researchers extracted relevant data, including, study purpose, design, sample, methods and findings reported by study authors and summarised in table form (See Table 1). They then synthesised all included papers by comparing and interpreting findings to identify themes, and grouped them by similarity.

## **RESULTS**

The review uncovered ten relevant articles (nine quantitative; one qualitative) published between 2007 and 2015. Six of the articles originated in Spain, two from United Kingdom, one from the USA and one from Singapore. Nine of the studies adopted the Stream 2 self-report modal and one used a Stream 3 mixed model. To address our research question, we categorized the findings as four themes: (1) EI as a buffer for stress; (2) EI as a means to reduce fear and anxiety about death and dying; (3) EI as a means to promote effective communication; and (4) EI associated with improved performance. In the following paragraphs, we discuss each of the themes in more detail.

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Insert Table 1 about here

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### Theme 1: Emotional intelligence buffers stress

As expected, in reviewing the literature surrounding EI, emotional engagement and affective events, we found that the most common theme related to the influence of EI on physical and psychological effects of stress. Five studies reported positive associations between EI, physical and psychological health (Augusto Landa and Montes-Berges, 2009; Birks et al., 2009; Chan et al., 2011; Montes-Berges and Augusto, 2007; Por et al., 2011). In support of

the contention that EI moderates the effect of stress, Montes-Berges and Augusto (2007), Birks et al. (2009) and Por et al. (2011) reported a direct relationship between higher EI, and lower levels of stress.

Augusto Landa and Montes-Berges (2009) highlight that students with higher EI scores experienced better levels of general health than those with lower scores. These results were supported by Por et al. (2011), and mirror research findings from other disciplines (Ruiz-Aranda et al., 2014). In reference to psychological effects, these results tell us that EI contributes to overall well-being by reducing the risk of depression and anxiety (Augusto Landa et al., 2009; Chan et al., 2011; Montes-Berges and Augusto, 2007). An avoidance coping style resulted in suboptimal academic and clinical performance and a higher risk of emotional distress (Augusto Landa et al., 2009; Por et al., 2011). Emotion-focused coping was also found to be associated with poorer mental health, insofar as the persistence of negative thoughts increases the risk of anxiety and depression, which contributes to loss of work-life satisfaction (Augusto Landa and Montes-Berges, 2009). This provides evidence that lower EI, particularly an inability to perceive and understand emotion, may lead to anxiety and depression.

### Theme 2: Emotional intelligence reduces death anxiety

Three of the included studies examined relationships between EI and attitudes to death and dying (Aradilla-Herrero et al., 2012; Edo-Gual et al., 2015; Espinoza and Sanhueza, 2012).

Aradilla-Herrero et al. (2012) and Edo-Gual et al. (2015) found that students with higher EI experience less fear of death of others. They also found that fear of death of others decreased across a three-year nursing program. Espinoza and Sanhueza (2012) reported

similar findings whereby those students with higher EI experience less fear of death of others as they progress through their education programs.

### Theme 3: Emotional intelligence promotes effective communication

Preparation for emotional engagement and development of communication skills are important for patient care and multidisciplinary team work (Chan et al., 2014; Montes-Berges and Augusto, 2007). Students need to begin developing effective communication skills very early to manage conflict, which represents an inevitable but potentially distressing part of nursing practice. Chan et al. (2014) showed that students with higher levels of EI tend to use conciliatory communication methods to deal with conflict, whereas those with lower levels of EI are more likely to use avoidance strategies. Given that teamwork and communication is vital to nursing care, an avoidance strategy would therefore seem to be less desirable. Similarly, Montes-Berges and Augusto (2007) identified that students with higher scores in EI are less likely to engage in confrontation, most probably because they are able to identify and moderate specific emotions.

### Theme 4: Emotional intelligence leads to improved performance

Harrison and Fopma-Loy (2010) used reflective journal prompts based on a mixed model of EI described by Goleman et al. (2002). They found that emotional awareness helps students to understand and manage anger, frustration and anxiety during interactions with patients. This research adds support to the contention that EI may be further developed using learning strategies aimed at improving EI. Harrison and Fopma-Loy (2010) argue in this regard that an ability to manage emotional reactions should result in improved patient care outcomes, nursing performance and ultimately lead to reduced attrition rates. This research

provides empirical support for previous research that identified the ability to manage own and others' emotions as vital for judgment making, problem solving and performance (Kooker et al., 2007).

## **DISCUSSION**

Our review has synthesised a relatively small amount of literature relating to EI and affective events arising out of emotional engagement during CPEs. The majority of the studies included in our review originated in Spain, with smaller representation from the UK and the USA. The ten articles we identified in this review have all been published since 2007; and this indicates that EI and the effects of emotional engagement is a relatively recent subject of inquiry. We also found that self-report tests (Stream 2) are the most popular, followed by mixed model (Stream 3) tests. Unfortunately, it appears that the cost and availability of ability (Stream 1) EI tests may have contributed to the choice of test. As a consequence of this, the number of different variables examined has led to considerable heterogeneity, which in part may be attributed to confusion in the definition of EI. As recommended by scholars in emotions-related fields, a consistent approach to measurement, choice of variables and replication of studies would make clearer the advantages of EI particularly in relation to affective events.

Mayer and Salovey (1997) argue that the ability to respond to affective events requires nursing students to use emotional perception, facilitation, understanding and management skills in order to provide holistic care to the patient. Overall, we found evidence that adequate levels of EI may help nursing students to prepare for emotional engagement during CPEs. Additionally, the studies we reviewed provided support for previous research around coping styles, positive stress management, anxiety and mental health (Begley and



Glacken, 2004; Ciarrochi et al., 2000). The moderating effects of EI on stress levels supported previous research in healthcare (Augusto-Landa et al., 2008; Ciarrochi et al., 2002; Mikolajczak et al., 2007). A high level of emotional stress was evident in the studies we reviewed and this is of concern, especially insofar as emotional stress can increase attrition. Students identified particular causes of emotional stress, for example providing end of life care which indicates that there is a need to monitor the effects of CPEs. The development of EI training for pre-placement preparation is an area that needs further development.

Some authors attempted to identify the nature of between person differences by focusing on emotion management strategies (Montes-Berges and Augusto, 2007; Por et al., 2011). This may provide much needed evidence and direction for the creation of pre-placement supports. For example, students with higher levels of EI seem more likely seek social support when faced with emotional engagement, rather than adopting an avoidance coping style. Specifically, individuals who understand and manage their emotions tend to adopt a problem-focused coping approach (which reduced stress levels). Problem-focused coping styles also contributes to improved nursing performance and academic outcomes (Montes-Berges and Augusto, 2007; Por et al., 2011). The findings of the studies we reviewed also support previous assertions that high EI levels allow perception and management of emotions that is more efficient and recourse to adaptive coping (Mikolajczak et al., 2008). Recent research on the topic of coping, support seeking and EI has shown positive outcomes for individuals who seek support from others (Zeidner and Matthews, 2016). Therefore, clear guidance to students provided prior to CPE about what supports are available would be of benefit.

Based on our review, we found that students identify end-of-life care as particularly stressful (Jack, 2012; Parry, 2011; Rees et al., 2015). Fear of death seems to be to be high in nursing and likely to be higher in those individuals who feel ill prepared (Espinoza and Sanhueza, 2012). With the potential for emotional distress because of exposure to death, the ability to understand and to manage own emotions is essential for quality patient care. All the authors we reviewed recommended that pre-preparation EI education for CPE would be of value in reducing the anxiety and fear surrounding end of life care. They discussed linkages to compassion, particularly in relation to the need to establish relationship boundaries and positive coping strategies.

We also note several challenges to the adoption of EI in nursing education programs. These primarily relate to differences in expectations of emotional engagement in nursing practice. While healthcare organisations attempt to improve nursing roles and to reduce attrition, the underlying conflict between caring and organisational demands needs to be addressed at both a professional and system level (Watson, 2009). Nursing students over time develop experience of managing their own and others' emotions during nursing practice. Therefore, emotion, a natural component of nursing, appears to be embedded in professional practice. Additionally, if EI supports better nursing performance and quality care, then increased consideration of the effects of emotion would appear to be a positive adjunct to nurse education programs.

Finally, and as with any research, we acknowledge that our study has limitations. First, because of the range of EI measures used, elements of each EI construct adopted for individual studies (total or branch scores) and the lack of comparable variables, systematic review or meta-analysis was not practical. Consistency in the use of scientifically validated tests would provide much needed evidence, a point acknowledged by many researchers

investigating EI in nursing. Ultimately, there is a need for a consistent approach to the study of EI within nurse education to allow generalisation to the population of nursing students undertaking their programs of education.

A further limitation is that none of the studies we found used a Stream 1 measure of EI.

Given the strong correlation of Stream 2 and (especially) Stream 3 models with personality, it could well be that the results we report in this review are an artefact of this correlation. In this regard, there clearly remains scope for future studies that employ a Stream 1 measures such as the MSCEIT.

### **CONCLUSION**

An interest in the potential value of developing EI to build and to sustain nursing competence has seen popularity over the last decade. There remains no systematic understanding of how nursing students manage the emotional stress response to affective events during CPEs, however. This is despite recognition that nursing students experience emotional distress, particularly during mandatory clinical placement. The literature surrounding attrition from nurse education programs (because of stressors associated with emotional engagement) supports the need for inclusion of EI education. In this regard, we found in our review that a body of research is emerging on the causes and effects of emotional engagement during CPEs. We especially highlight the evidence that EI appears to buffer the effects of stress.

In our review, we also found evidence that EI attributes of perception and subsequent processes of emotional understanding and management were important factors in the maintenance of physical and psychological health. Previous assertions by nursing scholars (Beauvais et al., 2011; Bulmer Smith et al., 2009), that EI education would be a useful

adjunct to improve both academic and clinical performance – and reduce the risk of emotional distress to date – has not been examined systematically. In this research, we addressed this shortcoming and confirmed that EI is indeed an underappreciated critical element of nursing education. Moreover, the ability to sustain compassionate care has the potential to reduce attrition particularly in those students who grapple with performing emotional labour. With EI having the potential to aid students in managing their own and others' emotions during nursing practice, the links between EI affective events arising out of emotional engagement and attrition need to be more fully explored. In conclusion, pre-placement EI education appears to have potential to impact positively the retention and well-being of students undertaking CPEs.

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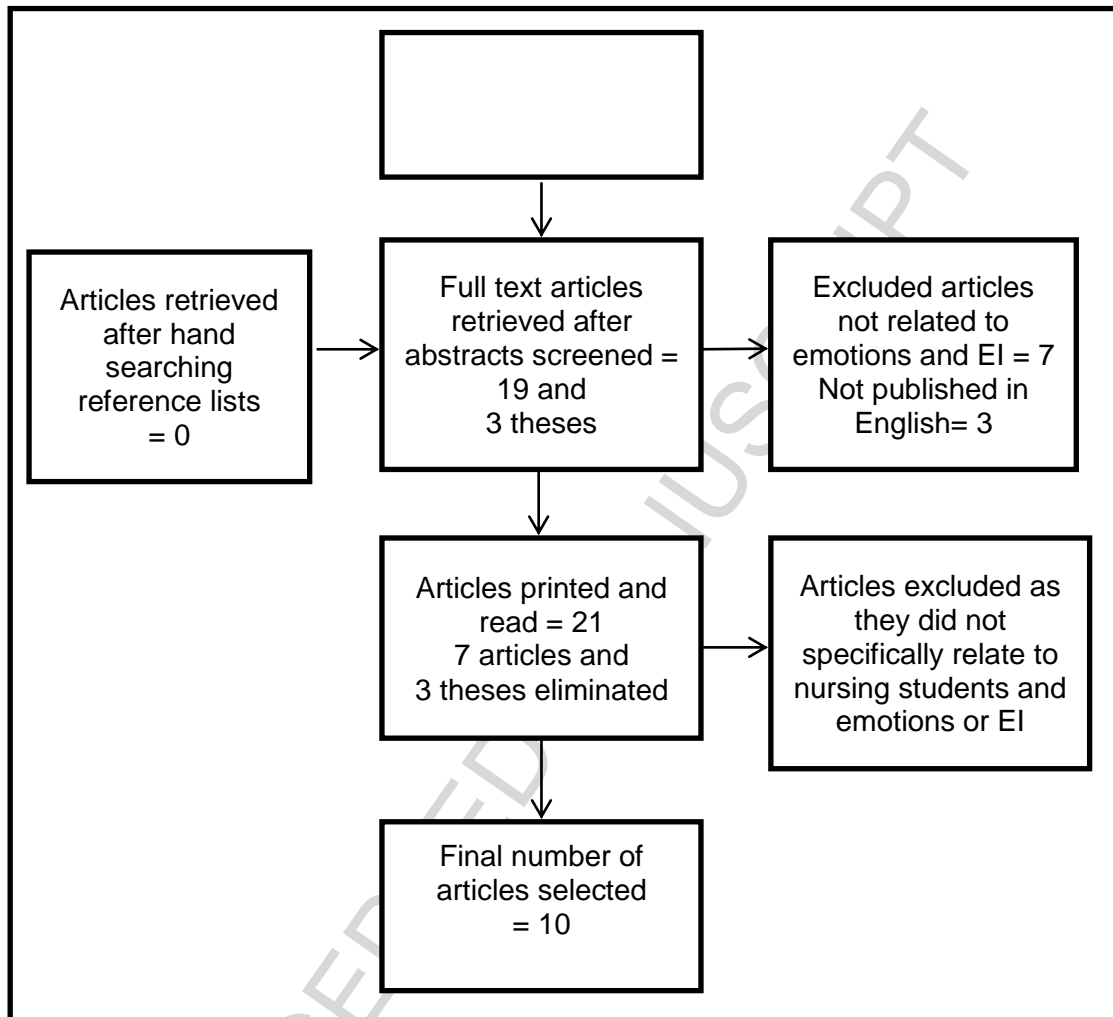
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Figure 1. Search Strategy and Outcomes





**Table 1.** Methodological details of studies examining emotional intelligence and emotional engagement in nursing students.

Authors/year/country	Purpose	Sample Size	Variables	EI Measure
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EI = Emotional intelligence  
PEI = Perceived emotional intelligence.  
SEIS = Schutte Emotional Intelligence Scale (Schutte et al., 1998)  
TMMS = Trait Meta Mood Scale (Salovey et al., 1995)

Aradilla-Herrero et al. (2012), Spain	Analyse relationships between death attitudes and PEI	n=243	Death attitudes	TMMS
Augusto Landa, et al. (2009), Spain	Examine the role of PEI in relation to nursing student self-concept	n=135	Personality traits Self-concept	TMMS
Augusto-Landa and Montes-Berges, (2009), Spain	Examine relationship between PEI, health and somatic illness	n=116	Health Somatic symptoms	TMMS
Birks et al., (2009) United Kingdom	Investigate if differences between EI and stress in four health professions' students	n=104	Perceived stress scale	SEIS
Chan et al. (2011) Singapore	Establish if nursing students have different demographic profiles, related to their EI, social support and stress levels	n=112	Demographic Social support Stress levels, confidence, education, finances	TMMS
Edo-Gual et al. (2015) Spain	Analyse relationship between EI, death attitudes, resilience and self esteem	n=760	Death anxiety Resilience Self-esteem	TMMS
Espinoza et al (2012) Spain	Understand fear of death in relation to EI and other variables	n=88	Fear of death Sociocultural differences	TMMS 24 (Spanish Version)
Montes-Berges and Augusto (2007) Spain	Analyse the relationship between PEI, coping, social support and mental health	n=119	Mental health Coping, Social support	TMMS
Por, et al. (2011) United Kingdom	Explore EI and the relationship with perceived stress, coping strategies, subjective wellbeing, perceived nursing competency and academic performance	n=130	Perceived stress Subjective wellbeing Perceived nursing competency Grade Point Average	SEIS
Harrison and Fopma-Loy (2010) United States America	Develop and test if 10 reflective journal prompts encourage reflection on EI competencies	n=16	Qualitative study	Goleman, Boyatzis & McKee (2002)

**HIGHLIGHTS**

- EI buffers the effect of stress and improves communication
- EI improves nursing performance
- Consistency in EI instruments used in nurse education will build an empirical evidence base