Investigation

THE PERCEPTION AND MANAGEMENT OF EMOTIONS IN NURSING STUDENTS UNDER CLINICAL TRAINING

LA PERCEPCIÓN Y LA GESTIÓN DE LAS EMOCIONES EN LOS ESTUDIANTES DE ENFERMERÍA EN FORMACIÓN CLÍNICA

María Anunciación Jiménez Marcos
Enfermera
Máster Universitario en Investigación en Ciencias de la Salud
Faculty of Health Sciences, Public University of Navarre. Pamplona, Spain
anunciacion.jimenez@unavarra.es
http://orcid.org/0000-0003-0961-0019

Ana María Insausti Serrano
Licenciada en Medicina y Cirugía
Doctor en Medicina y Cirugía
Faculty of Health Sciences, Public University of Navarre. Pamplona, Spain
ana.insausti@unavarra.es
http://orcid.org/0000-0002-4707-8046

Josune Zubeldia Etxeberria
Enfermera
Master Universitario en Investigación en Ciencias de la Salud
Faculty of Medicine and Nursing of San Sebastian. Public University of the Basque Country.
San Sebastian, Spain
josune.zubeldia@ehu.eus
http://orcid.org/0000-0002-0631-8058

María José Uranga Iturrioz
Enfermera
Licenciada en Antropología Social y Cultural. Doctora
Faculty of Medicine and Nursing of San Sebastian. Public University of the Basque Country.
San Sebastian, Spain
mariajose.uranga@ehu.eus
http://orcid.org/0000-0002-3987-4755

Ana Beatriz Bays Moneo
Fisioterapeuta
Máster en Fisioterapia Deportiva, Dra. en Medicina
Faculty of Health Sciences, Public University of Navarre. Tudela, Spain
anabeatriz.bays@unavarra.es
http://orcid.org/0000-0002-8341-0405

Corresponding email: anunciacion.jimenez@unavarra.es

Jiménez Marcos MA, Insausti Serrano AM, Etxeberria JZ, Uranga Iturrioz MJ, Bays Moneo AB, Trandafir PC

Paula Camelia Trandafir
Licenciada en Estadística, Dra.
Faculty of Health Sciences, Public University of Navarre. Pamplona, Spain
camelia@unavarra.es
http://orcid.org/0000-0002-4707-8046

ABSTRACT

BACKGROUND: Patient care must be understood holistically and to achieve this goal, nurses must be aware and familiar with the world of emotions. Poor handling of emotions by nursing professionals can affect their health, also leading to lower-quality care. Therefore, it is important to explore the management of their emotions before becoming a nurse. PURPOSE: To evaluate Perceived Emotional Intelligence in 3rd- year nursing students in an academic context and in clinical practicum. METHODOLOGY: Longitudinal and prospective design. The Trait Meta-Mood Scale-24 was used at three different moments, the first two corresponding to the academic context and the third to the clinical practice context, the age variable was also analyzed. RESULTS: 40 students of an average age (24.81±1.164 years old). Perception and Emotional Regulation were found to be different according to the learning context. Students over the age of 25 years old were also found to perceive their emotions better, but to understand them worse. CONCLUSIONS: Nursing students' perception of their own emotions may vary in function of their learning context, with age being a factor that has an influence on the management of emotions. Implications: In the design of the nursing program it's important to include managing emotions and to choose when to do so.

Keywords: Emotion intelligence, nurses, nursing students, nursing education.

INTRODUCTION

Since its origins, nursing has been focused on patient care. Patient care must be understood in a holistic way. To accomplish this aim, nurses must be aware and become familiar with the world of emotions. Emotional mismanagement can affect the health of the professional and consequently the quality of the nursing care[1].

The theoretical and technical knowledge necessary for everyday practice should not be limited to training in pathologies, treatments, and care protocols. It should also include

knowledge of self-care techniques that enable the nurse to develop personally and professionally[2], including self-awareness and managing their own emotions.

In order to improve the aforementioned abilities, nursing professionals must know how to deal with their own emotions as well as those of others, and Emotional Intelligence can contribute to this.

The Emotional Intelligence concept was introduced two decades ago by Salovey and Mayer[3] who defined Emotional Intelligence as the ability to perceive, understand, and regulate the emotions of oneself and others. Nevertheless, it was Goleman[4] who popularized the idea outside the academic context, and who considered this construct within a wider range of skills and abilities involved during job performance.

The emotional work around nursing care was not patent until 2004, when two studies related to Emotional Intelligence were published.

In one of those articles, Freshwater and Stickley reflected on the importance of making Emotional Intelligence the focus for learning to care for oneself and for others in nursing training[5]. McQueen's performed the first meta-analysis on the topic, reviewing the literature about Emotional Intelligence, emotional work, and the value of this kind of intelligence in nursing[6].

Different studies have investigated the effect of Emotional Intelligence on health professionals health[1,7,8] and specifically on nursing professionals in stress management[9].

In addition, Emotional Intelligence has been associated with other benefits related to personal nursing skills such as an aid for protecting self-esteem[10] or its beneficial role in communication[11] and empathetic involvement[12].

The effect of Emotional Intelligence on stress in nursing students has also been studied[13,14].

In their study, Beauvais et al. recommend Emotional Intelligence training for nursing students since it would help to improve their critical thinking and in integrating every aspect of care as a whole[15].

Nowadays, nursing education includes the emotional support to the patient and/or family, but students are not provided with tools for managing their own emotions. That is the reason why, the evaluation of the Perceived Emotional Intelligence, could be an important aspect to be included in the capacitation programs oriented to develop the nurse emotional abilities.

First of all, we need to know the current nursing students' knowledge about emotional management in order to carry out a proper strategy? for including this type of knowledge in their training during undergraduate studies.

The working hypothesis is that the Perceived Emotional Intelligence varies along the student training, and that age, itself, as a life experience factor, contributes to this variation.

The objectives of this study are:
- To evaluate in three predetermined moments during the third year of the nursing programme, the emotional influence of the Clinical Training in

Perceived Emotional Intelligence (centred in its dimensions of perception, understanding and emotional regulation).

- To assess the influence of age on Perceived Emotional Intelligence.

METHODOLOGY
Study design

This is an observational, longitudinal and prospective study.

Data collection

Perceived Emotional Intelligence was measured in nursing students at three different times during the first semester: once, at the beginning of the clinical nursing 3rd course, then the week before the end of the teaching period, which coincides with the beginning of a period of clinical training and finally during their clinical training. The first two were done in an academic context, while the last measurement was carried out 9 weeks after, in the middle of the clinical training period.

The study was performed with students of Nursing during the third year of the course at the time of the recruitment period, from September until December of 2014. Assuming a confidence interval of 90%, the sample size of 40 participants would allow us to detect a significant change in Perceived Emotional Intelligence measurements of the different aspects with a power of 80%. Calculations were made with the sample-size library of the statistical program R, version 2.13.2.

On the first day of teaching, the students were invited to participate in the study. They were informed about the characteristics of the study and what would involve their participation.

Those who accepted to participate were given an informed consent form to be read and signed as part of the confidentiality procedure. Once the form was filled out, the students interested in taking part on the study completed the surveys on the same day.

The Trait Meta-Mood Scale (TMMS-24) assessment tool, created by Salovey, Mayer, Goldman, Turvey and Palfai[16], modified and adapted to Spanish by Fernández-Berrocal[17] was chosen for its validity and reliability as a measurement of P.E.I.in the context of Spanish Nursing[10] and Spanish-speaking nursing students[18]. This test explores the three key aspects of Emotional Intelligence with 8 elements for each: attention to emotions (perception), clarity of feelings (understanding), and mood repair (regulation). The survey includes 24 items in total.

The students were asked to evaluate the degree to which they agreed with each of the items on a Likert-type 5-point scale (1= not at all, 5= I totally agree)[17]. Higher scores indicate greater ability for Emotional Intelligence.

The variables studied were age, gender and the components of the TMMS-24, at the three measurement times.

Data analysis and processing

The analysis was performed using descriptive statistics such as: median, standard deviation, absolute and relative frequencies, according to the type of variable. Prior to the analysis the normality of the TMMS-24 data at the three measurement times of the variables were

measured using the Shapiro-Wilk statistic test and the homogeneity of variances, with the F test of equality of variances. When the data was normal, the repeated measures ANOVA test was used. In addition, to determine at what time of the study the differences occurred, the medians were compared in pairs, with the Bonferroni test in the case of normality. For the relationships between the three TMMS-24 aspects and age, the Pearson correlation coefficient was used for normal data and the Spearman's rank correlation coefficient for non-normal data.

Significance was considered for $p < 0.05$. Analysis was carried out using statistical package SPSS version 23.

Ethical aspects

The present study with the code PI-025/16, has been approved by the Ethics Committee of the Public University of Navarra.

RESULTS

This study aimed to analyse the differences in the three aspects of Perceived Emotional Intelligence (perception, understanding and regulation) between the three measurement times, both in the academic context and during clinical training.

40 participants, all of them third-year nursing students, were enrolled in the 2014-2015 academic year, their average age was 24.81 ± 1.164 years. Of these, 66.7% were 19-24 years old, while 33.3% ranged from 25 to 48 years old.

In terms of distribution by sex, the majority were women, namely 36 women (90%) and 4 men (10%).

The students involved in clinical training belonged to the following clinical contexts: 11 participants were in Maternal and Infant Care (27.5%); 9p in Primary Care (22.5%); 7 in Gerontology (17.5%); in Surgery (15%); 6 in Internal Medicine (15%); 1 in Emergency Care (2.5%).

It was observed that when the Shapiro-Wilks test was applied, the values of perception, understanding, and regulation of emotions at the different times was distributed normally.

With respect to perception at the first measurement, the middle 50% of participants perceived their emotions between (24.75-31.25), with a mean of 28.64 ± 4.787; at the second measurement, the middle 50% was situated at (25-32.5), with a mean of 28.46 ± 5.254, and at the third measurement, the middle 50% was (24.75-30.25), with a mean of 26.96 ± 4.862. According to Salovey et al.[16] following the TMMS-24 assessment score, a range around 22-32 in men and 25-35 in women correspond to an "adequate perception" in our study it is also seen that the middle 50% of our sample perceived that it had an "adequate perception" of its emotions at all three times of evaluation.

When the variable understanding was analysed it was found that, at the first measurement, the middle 50% of the sample was between 26.00-35.00, with a mean of 29.45 ± 5.339; at the second measurement, the middle 50% was between 26.00-32.00 with a mean of 28.67 ± 5.080; and at the third, the middle 50% was 26.00-32.75 with a mean of 28.89 ± 4.962. Following the TMMS-24 assessment scores, an understanding with values from 2635 in men and 24-34 in

Jiménez Marcos MA, Insausti Serrano AM, Etxeberria JZ, Uranga Iturrioz MJ, Bays Moneo AB, Trandafir PC

women correspond to "adequate understanding" according to Salovey et al. (1995). In our results it was seen that in this group the middle 50% has an "adequate understanding" of its emotions in all three measurements.

Finally, in when the last aspect involved in Emotional Intelligence regulation was analysed, the results obtained showed that at the first time of assessment, the middle 50% presented values between 25.00-33.50 with a mean of 29.52±6.263; at the second time, the middle 50% was between 27.00-34.00 with a mean of 30.41±5.104; and at the third, the middle 50% was located between 28.00-34.50 with a mean of 30.24±5.350. Taken into account that the ranges (24-35 in men and 24-34 in women) correspond to an "adequate regulation" according to Salovey et al. (1995), it can be concluded that for the middle 50% central of the sample of this study, perception of the management of their emotions at the different measurement times is also adequate in our population.

The statistical tests carried out for each of the variables studied, repeated measures ANOVA, indicate that two of the aspects of Perceived EQ (perception, regulation) showed significant differences between measurements at the three points in time (p-value: 0.010, 0.041), namely, at the end of the study, emotional perception decreased in mean from 29.34 to 26.96, while regulation increased in mean from 29.13 to 30.24. As for comprehension, there were no significant differences (p-value: 0.277).

On the other hand, upon studying the marginal measurements of the aspects of Perceived Emotional Intelligence (Figure 1), it was observed that in the case of perception, the trends show a pronounced decrease in the first measurement which continues until the last measurement. However, in regulation, appreciation increases from the first to the second measurement, and then goes down slightly at the third measurement. In contrast, understanding decreases from the first to the second measurement and then remain virtually unchanged in the following measurement.
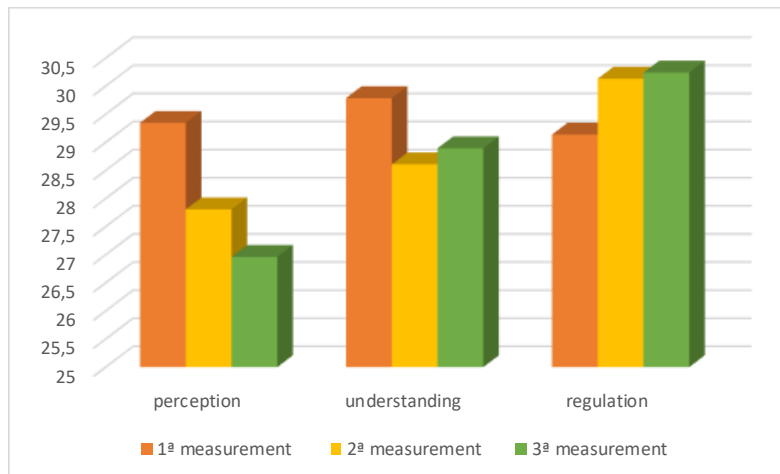

Figure 1. *P.E.I. trends in the 3 measurements.*

The next objective in the study was to check if significant differences occurred in the corresponding TMMS-24 assessment, thus we compared pairs using the Bonferroni method. Significant differences were found between the first and the last measurement in the case of perception and regulation variables (p-value: 0.038, 0.043).

One of the factors that may have an influence on the three aspects of Perceived Emotional Intelligence is the age of the students. So, a correlation analysis was carried out between these three aspects of Perceived Emotional Intelligence (perception, understanding, and regulation of emotions) and age at the time of the three measurements.

According to the profile of the students enrolled during the third year of Nursing and their perception of the aspects of Perceived Emotional Intelligence, the students were divided into two age groups: age1, students admitted via selectivity and Occupational Training and age2, students admitted in the program for persons over 25 years of age. The Spearman Rho statistics for correlations between each age group and perception, understanding, and regulation were used. Pearson coefficient for correlations between the aspects of Perceived Emotional Intelligence itselves were calculate, because of the normality of these variables.

The results indicate a moderate negative correlation between the age1 group and perception (Spearman: -0.302), which means that the older the students are the worse is their perception of emotions. Between age1 and understanding, and between age1 and regulation there was a slight positive and/or negative linear correlation (0.065;-0.076), according to the Spearman coefficient. The results between the age 2 group and the three aspects of Perceived Emotional Intelligence follow the same behaviour, except for understanding, where a regular positive correlation was found (-0.231; 0.300; -0.062). In this last case, the meaning of the correlation can be described as follows, the older students had better understanding of the emotions.

Afterwards correlation among the levels of PEI for a comparison of the age1 group and age 2 group are made. It is observed that the perception is seen to have a slight positive correlation with understanding in the first group (0.178), just the opposite as the second group (-0.145). Thus, for the age1, higher age links to higher understanding, meanwhile in the age2, the older students have less understanding. Can be seen a moderate/high positive correlation between regulation and understanding in both groups (0.420; 0.688). In other words, a higher regulation corresponds to a higher understanding.

DISCUSSION

The emotional handling abilities of health professionals have shown to play a very important role in their own health and consequently in the care they may deliver to patients. This learning is usually gained by every individual with daily clinical practice. Therefore, it would be desirable to acquire strategies for emotional management in parallel with the acquisition of theoretical knowledge. This study investigates emotional management among nursing students.

This work was carried out on Spanish nursing students during the third year of degree. They were evaluated at three timeframe points: at the beginning of the course, one week before starting the clinical training and during. The objectives were to evaluate if either the clinical training temporal proximity or the clinical training making play a role on students 'emotions. On the other hand, we wanted to evaluate if the students 'emotional handling changes overtime.

It must be said, that these students had already completed two cycles of clinical training. Therefore, although it was not the first time they were facing patient care, at this stage they are required to have a greater autonomy in assuming more responsibilities on patient care.

The analysis of Emotional Intelligence dimensions results in our study have shown that there is a statistically significant change, in Perception and Regulation, showing a decrease in both. However, it has not been seen in Understanding.

In the investigation, more than 50% were running their clinical training in Primary Care and Geriatric Centres. These Departments were not emotionally demanding for nursing students. The fact that they may not be facing situations that could generate discomfort during this clinical training, has probably contributed to a reduced emotional stress and therefore, they scored lower in the dimensions of perception and regulation of their emotions.

One possible explanation is that they may have not paid enough attention to their emotional dimension as they did not need to resolve conflicting situations during clinical training.

We are not aware of any other studies published in the literature evaluating Emotional Intelligence in different training contexts within the same academic year, although data from comparisons made among different nursing courses, showed that students in the later years had higher Emotional Intelligence scores[20,21]. These results may reflect that, in parallel with the normal process of personal maturation as students advance in learning and experience more complex clinical contexts, they become more aware of the role they play in helping the patient and/or family, as well as the responsibility that this involves, which makes them aware of the need to manage their own emotions.

In addition, we found that the participants presented an adequate level of Attention, Understanding, and Regulation of their emotions, both in the academic and in the clinical context.

These results coincide with those of Aradilla-Herrero et al.[22] wherewin a group of nursing students it was observed that the levels of the different aspects were adequate. It was also observed that the levels of attention to emotions in nursing students were high.

This work, unlike ours, was a transversal study. We collected our data in a longitudinal fashion, in three different timeframe moments along an academic year. It must be taken into account that these students are also going through a vital phase of transition in their lives, between adolescence and adulthood.

Another important finding is the

relationship between age at which the participants studied nursing and aspects of Perceived Emotional Intelligence. During this analysis, the students were divided into two groups depending on the age that they commenced their nursing studies. The first group, those who have less than 25 years, had scored less results in the three aspects of Perception, Understanding, and Regulation of their emotions.

It is worth noting that those students are, at this stage of their development, experiencing important changes in their lives. They are taking steps towards independence, leaving their nuclear family, moving to different circles of friends and establishing new social networks and in addition, they are facing the challenge of attending college. It is a stage full of changes and stress generating situations. It is usual that students are well trained in the skills and knowledge related to the capabilities they are going to need to start in college, but however, they lack of enough training on optimal strategies to face emotional demanding situations. Besides, situations of denying their own feelings may arise and this may be influencing the results obtained in this age group.

In the second group, individuals over 25 years old, the analysis of the data data analysis reflects that the older they were, the better they understood their emotions. This These results are in agreement agree with those of Aguilar-Luzón el et al.[23].

In another study, with participants divided in three different age groups: young people, adults, and older adults, the Test of Emotional intelligence (MSCEIT) was used to analyse perception of emotions, facilitation of emotions, understanding of emotions, and regulation of these. As in the previous study and as observed in our research, they also confirmed that age correlates slightly and positively with respect to the understanding of emotions[24].

This correlation might be due to the fact that as people age, their life experience may be an adjuvant factor for dealing with the world of emotions. This does not happen automatically, as it would then be enough to let time pass so that professionals could manage their emotions properly. Age will act as a positive factor as long as a deep thinking from their learning is taken. We do believe that, if a specific training for emotional mana-gement would be included during nursing studies, the learning obtained from emotional experiences would be more frequent and of better quality. In fact, this emotional learning, in those belonging to the under-25 age group, is in general much more limited and individuals within this group of age probably have until then, scarcely developed, their self-knowledge, a situation which may explain the lack of relationship between the age factor and Perceived Emotional Intelligence.

Another interesting aspect that has been evaluated in this study is the relationship between Perceived Emotional Intelligence dimensions and the influence of age on these relationships.

Differences have been found according to the age group. It seems that this factor is important in the relationship between aspects. Thus, in students under the age of 25, the more they perceive their emotions, the better they understand them and the more able they are to increase their

regulation. That is, those young people who are able to recognize them, are able to develop strategies for understanding and coping them. These results are similar to those found by other authors, where there was a positive relationship between perception and understanding[14], and between perception and regulation of emotions[14,25] among health science students.

It seems that the better the person's emotional perception, the better the understanding of that circumstance will be and also, would be in better disposition for its adequate control and management.

On the other hand, among the students in group 2, the more they perceive what they feel, the less they understand and regulate their emotions. These results may be surprising as in principle, the more it is perceived, the better emotions are managed, provided that, the training and the management of those skills have been properly carried out and developed. Although the age factor could be an adjuvant and helping element for the right facing of emotional situations, this step is not made in an automatic way. Feeling your emotions can create greater discomfort by putting them in relation to past unresolved experiences. In these cases, when people feel their emotions, conscious or unconsciously, they pay less attention to its regulation and understanding, as a defence mechanism. Some authors have shown that through resilience techniques, a traumatic experience can be overcome resulting in the student's personal growth (26), however, it may be the case that in our study, students have not adequately overcome their 'traumatic experience'.

In our study, when measuring the variables of study in different learning contexts, it is observed that in both groups, independently of age, understanding of emotions correlates positively with emotional regulation in both the academic and the clinical context.

Another study[22] has also observed this relationship, but it was a cross-sectional study and therefore it was not possible to observe possible progress or evolution as we did in our longitudinal study. Similar positive data have been obtained in the correlations between understanding and emotional regulation in a transversal study with nursing professionals working in hospitals[27].

One of the results of our study reflects that nursing students perceive that they pay attention to their emotions, they know their origins, and they are capable of adequately managing them. If this were true, they would manage their unpleasant emotions better and they would be able to face stressful situations. These circumstances show the need to include the management of emotions in the training of nursing staff. However, this should be done in harmony with the process of maturity and exposure to stressful parts of their studies. The present work can provide information for the development of the curricular programme, especially with dealing with the 'when and how' of intervention groups should be included. Besides, our sample is not homogeneous as the majority of participants are females. Although the number of male students is increasing, the proportion of female is still the majority in our course.

According to the scientific evidence available, stress is a problem

suffered by the nursing collective[28]. Emotional Intelligence can have a protective effect against stress[29]. Therefore, if much effort is put into equipping students with the tools to deal effectively with professional roles, it is essential to carry out a parallel emotional education so that, they can face these emotionally demanding situations. At the same time, we could prevent these situations from being the starting point for serious stress and burn-out[15,30].

CONCLUSIONS

A better perception of emotions can lead to a more efficient handling of emotions. Age can be a contributing positive factor in such handling. It is essential to have tools like resilience to manage emotions properly.

The inclusion of emotional management throughout nursing degree studies, should be done for the benefit of both professionals and patients and itmay lead to a healthier and more effective therapeutic relationship.

Implications for Nursing Education

When thinking about how to design the curriculum for a program to teach nursing, aspects of training in Emotional Intelligence must be taken into account and assessed. It is important to know when to start this training and in what learning context, as well as taking into account students' age. Different formats could be designed and adapted for each group.

For this training to be effective, the development of professional skills for daily practice must be ensured. This education in Emotional Intelligence should be carried out during both, their academic life and their personal life, to help them to be aware of their emotions, and to help them to understand these better and thus be better able to regulate them.

Although it seems that there may be a consensus on the need to include this training in the nursing degree an important question to address is where to place it, to be effective. We have to choose the right place and moment to integrate it wisely during the nursing degree, as it is crucial for the students to be aware of the demanding situations they will need to live and face, above all, in the daily clinical practice.

For us, the appropriate learning areas would be placed as follows:

- Study of psychosocial sciences as a first contact with emotions and its theoretical framework.
- Work on aspects of communication and therapeutic relationship, where issues of self-knowledge and Emotional Intelligence will be developed. Guidelines for good emotional management would be worked out, with theory and students' own experiences.
- Work on concepts related to mental health, integrating topics such as anxiety disorders with previous knowledge, to promote care of the sick and selfcare.

With this itinerary, the nursing student in the higher courses will be aware of the need of integrating emotional tools and they will become more aware of the relevance of managing their own emotions in clinical practice.

Another relevant aspect is to start working from groups as homogeneous as possible in order to make use of aspects such as the student's life experience. Bearing in mind that Emotional Intelligence is related to resilience[31], in those students with problems understanding and regulating their emotions, the I.E could help them to perceive their experiences from another perspective and give them a positive approach to overcome those situations so that they can advance in their personal development.

However, there is no doubt that we cannot always ensure that students will assimilate the knowledge provided. Therefore, if it is found that their understanding of emotions has not improved, they can be advised to seek the help of the university´s psychological services, with the aim of doing more individual personal work.

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