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Empathic attitudes among nursing students: a preliminary study

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Abstract. *Background and aim:* An empathic approach is fundamental for therapeutic relationship between nurse and patient. According to some researchers, female nursing students show higher empathic attitude in comparison with males, but both show a decline in empathy level as their studies progress. This preliminary study evaluated the self-reported emotional empathy level among undergraduate students at first and second year of nursing 3-year course. *Method:* To assess empathy level, the Balanced Emotional Empathy Scale (BEES) was administered to all students enrolled in the 2015/16 academic year (N=142), at the beginning of first year (T0) and at mid-point of second year (T1) of nursing course. Data were statistically analyzed. *Results:* 118 nursing students participated in the first and 99 in the second survey. The BEES global mean score for the longitudinal group (n=99) slightly decreased from T0 (mean=37.1±19.5 SD) to T1 (mean=33.5±22.6 SD) (t=1.20, p=0.23; t-test for paired data). Female students reported a statistically significant higher mean BEES score compared to male students in both surveys. *Conclusions:* Our preliminary data suggest a slight decline in empathy level among nursing students with the progress of study course, in accordance with previous studies. In particular, our study shows higher levels of empathy in female students and lower levels in male students, compared to other studies. Further surveys aimed at investigating the empathy attitude at the end of nursing course could confirm the decline tendency reported by this preliminary study. Other research focusing on the causes of empathy decline are necessary to explain this phenomenon.

Key words: preliminary study, empathy, undergraduate nursing students, gender differences

Introduction

Empathy and nursing

If empathy is defined as the ability to "put oneself in others' shoes and [to] make their experiences one's own", it represents an individual's ability to understand and share another person's thoughts and feelings (1-6). Empathy influences how we interact with others. It is a process, whereby an empathic listener is able to put his or her own way of perceiving the world into the background in order to better feel and understand the experiences and perceptions of the speaker (6). A growing number of authors view empathy as a multidimensional construct, composed of affective, moral, cognitive, relationship-related and behavioural dimensions (7-12). Although the scientific community recognises the presence of cognitive, affective and behavioural components in the description and measurement of empathy, the emotional aspect remains its cornerstone (4). The emotional empathy, in particular, is a reflection of positive interpersonal relationships and social skills, a pro-social orientation, and engagement in altruistic behaviour (13).

In recent years, the nursing profession has been impacted by growth in scientific knowledge and technological advances. Nonetheless, the essence of the profession is and continues to be a helping relationship with the person receiving care (14). An empathic approach is fundamental to the development of the therapeutic relationship between nurse and patient (15, 16) and, of all of the attitudes that are most desirable in a nurse, empathy is the most important (17). The objective of the nurse-patient relationship is to ensure that the needs of the patient are identified and that the necessary therapies and care are provided. In order to identify these needs, nurses should be capable of fully understanding their patients' feelings, opinions and conditions. All of these things require a high capacity for empathy (18).

A good empathetic capacity in nurses has been linked to greater patient well-being and satisfaction, better patient compliance, and a decrease in errors and complications, not to mention better health outcomes (19-26). It may be that an empathetic approach can result in a shorter treatment period or a reduced demand on resources (27). A lack of empathy, on the other hand, may interfere negatively with the diagnosis, treatment and care processes (14). According to Doyle et al. (17) a review of cases presented to the nurses' disciplinary tribunal in New South Wales (Australia) suggests that the majority of complaints against nurses in this jurisdiction are the result of callousness or lack of empathy. In addition, empathy is associated with lower levels of burnout among nurses and nursing students (28-30) and higher professional satisfaction (14, 31).

Empathic attitudes of undergraduate nursing students

The ability to empathize can be influenced by many factors: gender, age, job training and experience (32). Many studies have shown that women demonstrate greater empathic tendencies in comparison to men (27, 33-35). An Italian longitudinal study, which assessed the efficacy of a specific training course for improving empathy skills in nursing students, highlighted that the training was more effective for the female students than for their male counterparts (36). Another Italian study revealed that the impact of gender on empathetic tendency increased during nursing training, as demonstrated by the higher Balanced Emotional Empathy Scale (BEES) scores of female students with respect to male students (37). Although empathic skill is a mutually beneficial element in the relationship between nurse and patient (20, 21), according to some researchers nursing students nonetheless demonstrate low to moderate levels of it (21, 30, 35, 37-39). As far as concerns the development of the empathic tendency during the course of nursing studies, the literature offers conflicting results. The cross-sectional studies conducted in Australia by Williams et al. (27) and by McKenna et al. (40) recorded no statistically significant differences between the mean levels of empathy among students from different course years. Three transversal studies, however, which compared a cohort of students at the beginning of their studies with another about to conclude them (34, 41, 42), revealed a "decline" in empathy. Ward also observed, at the Jefferson School of Nursing, a decrease in empathy within the same cohort, at the end of one course year in comparison with its beginning (43). Similar findings were also recorded among medical students and students of other health professions (41, 44-46). Lastly, a recent cross-temporal meta-analysis, conducted by Konrath et al. on 72 samples of American college students, revealed a decline in perspective taking and empathic concern, accompanied, on the other hand, by a rise in narcissistic and individualistic tendencies (47).

Unfortunately, the literature that examines empathy levels in nursing students is often inconsistent, because it is characterised by cross-sectional research and small samples of participants. Longitudinal studies should therefore be encouraged, in order to measure the development of empathy over the course of their studies and analyse the effect of communication skills training on the empathy of nursing students (30, 34). We believe that such an assessment could help us not only to recognise the changing trend, but also to better understand when it becomes necessary to create learning activities that can help students apply empathy or halt its decline.

Aim

The aim of this study is to evaluate the self-reported emotional empathy level among undergraduate students at first and second year of nursing 3-year course.

Methods

Study design

We have carried out the first stage of a three-year longitudinal study whose objective is to assess the development of emotional empathy among nursing students enrolled in the Modena Nursing Degree Programme at the University of Modena and Reggio Emilia, Italy.

Procedures

In order to assess the empathy level among nursing students, two subsequent surveys were scheduled: one at the beginning of their course of study (T0 at 30 October 2015) and one at the mid-point (T1 at 1 March 2017). The empathy level evaluation of this preliminary study will extend to the third year of nursing course (T2 at 30 October 2018), among the same student group, in order to obtain more complete results.

Participants

From a sample composed of all students enrolled in the 2015/16 academic year of nursing course (n=142), 118 students, who participated in the first evaluation (T0), represented our initial group, of whom only 99 participated in the second assessment (T1). This second group (n=99) represented our longitudinal sample, whose BEES scores at T0 and T1 were pairing compared.

Measures

The instrument that we have chosen to assess levels of empathy, intended as a susceptibility to becoming vicariously involved in others' emotional feelings and the tendency to develop positive interpersonal relationships, is the BEES, which has already been used in studies conducted on samples of Italian nursing students (30, 36, 37). BEES is a self-report instrument validated in the Italian language (48, 49). It includes 30 items about which participants express their level of agreement/disagreement on a seven-point Likert scale, with negative and positive answers, designed to avoid social desirability in the responses. The Italian version of the BEES validated five dimensions that deal with the following areas of emotional empathy (50):

- D1 'Impermeability to the emotional feelings of others', "7 items referring to situations in which the respondent is unwilling to become emotionally involved in another person's feelings (e.g., "*I am not affected easily by the strong emotions of people around me*"; Cronbach's α=0.74)";
- D2 'Susceptibility to the emotional feelings of others', "6 items tapping the respondent's willingness to become involved in others' feelings and share their suffering (e.g., "*I get a strong urge to help when I see someone in distress*"; Cronbach's α=0.66)";
- D3 'Emotional spread responsiveness', "7 items referring to the respondent's tendency to identify with characters in films, plays, stories, etc. (e.g., "*I don't get caught up easily in the emotions generated by a crowd*"; Cronbach's α=0.68)";
- D4 'Susceptibility to emotional involvement with people nearby', "6 items tapping the respondent's feelings shared in the presence of others who are suffering (e.g., "*It upsets me to see someone being mistreated*"; Cronbach's α=0.62)";
- D5 'Tendency to avoid emotional involvement with fragile people', "4 items reflecting the respondent's tendency to avoid becoming emotionally involved with fragile or vulnerable people like children or the elderly (e.g., "*Helpless old people don't have much of an emotional effect on me*"; Cronbach's α=0.55)".

The Cronbach's α coefficient for all 30 items ranges from 0.83 to 0.87, according to most authors (49, 50). High scores at D1, D3 and D5 indicate scarce capacity to empathize, while low scores at D2 and D4 indicate a good empathetic tendency. The total BEES score indicates high levels of empathy if it is greater than the mean value of 32±18 (Standard Deviation).

The questionnaire also asked students their gender and age, whilst the date of the questionnaire's completion and course year were filled in each form. The questionnaires were distributed in the classroom and the students were given the time necessary to be able to fill them out in full. All of the information collected

during the study was kept anonymous. However, each student was asked to insert an identification code that only he/she would recognise in order to allow the pairing of first (T0) with the second (T1) questionnaire.

Ethical considerations

The study's purpose and methods were described to the students by the principal investigator. Participants' anonymity and confidentiality were assured and their decision to participate voluntarily in this study was respected. The students were assured that neither the information obtained through administration of the scale nor a failure to participate in the study would have any impact on their course of study. The study was authorized by the Director of the Nursing Degree Programme.

Statistical analyses

The statistical analysis was performed using the software Stata (v12 StataCorp LP, College Station, TX). Continuous variables were reported as arithmetic means and standard deviations (SD).

We computed a total BEES score (reflecting emotional empathy) and five subscale scores (dimensions), in accordance with the indications of the authors who adapted and validated the BEES Italian version (48, 49). The t-test for paired and unpaired data was used to compare the two mean scores of BEES at T0 and T1; the Wilcoxon rank test for paired data was used for the medians. We considered statistical significance to have been attained if $p<0.05$.

Results

The students who agreed to participate in this study and completed the questionnaire at T0 were 83% of our sample (118/142 students). Of these 118 student participants, 79% were female and 21% male (the imbalance between females and males reflects the distribution of participants). The mean age of students at T0 was 20.20±2.58 (SD) years. 99 of the 118 students who had previously completed the questionnaire at T0, participated in the second BEES administration (the other 19 students were not present at T1 because they were not attending the second year of Nursing course). The mean age of students at T1 was 21.29±2.82 (SD) years.

The empathic tendency

At T0, the nursing students in the initial group (n=118) demonstrated a total mean empathy score of 37.0±19.5 SD and mean empathy scores for each dimension, as shown in Table 1. At the second administration (T1), the total mean score recorded in the longitudinal group (n=99) was 33.5±22.6 SD.

If we compare the total empathy at T0 with that at T1 for the initial group (n=118) and the longitudinal group (n=99), we can see that the empathy in the 2nd year has decreased by 3.5 on average. The comparison between T0 and T1 did not evidence any statistically significant difference (t=1.220, p=0.224; t-test for unpaired data). The mean scores of total and each dimension BEES, registered in the longitudinal group (n=99) at T0 and T1, are shown in Table 2.

Table 1. Total empathy and empathy by dimension for the initial and longitudinal groups

BEES Scores	Initial group n=118 T0 Mean (SD)	Longitudinal group n=99 T1 Mean (SD)
D1: Impermeability to the emotional feelings of others	-7.5 (6.0)	-6.0 (7.0)
D2: Susceptibility to the emotional feelings of others	10.7 (4.0)	10.6 (4.7)
D3: Emotional spread responsiveness	-0.60 (5.3)	-1.5 (8.9)
D4: Susceptibility to emotional involvement with people nearby	10.9 (4.9)	10.9 (4.9)
D5: Tendency to avoid emotional involvement with fragile people	-3.3 (2.6)	-2.4 (3.0)
Total	37.0 (19.5)	33.5 (22.6)

The decrease in empathy in the 2nd year of the course was also confirmed by a comparison of the longitudinal group's scores at T0 and T1 (Table 2), although the difference between the two mean values was not statistically significant (t=1.202, p=0.232; t-test for paired data). The median values of BEES score decreased at T1 in comparison with T0, showing a decline in empathetic tendency (Table 3). Application of the Wilcoxon rank test for paired data did not evidence any statistically significant difference.

The gender difference

The analysis of the first survey (T0) highlighted lower empathy mean scores among males in all BEES dimensions in comparison with females (Table 4). This difference was confirmed by the total BEES empathy score, where males were found to have a mean score of 17.4±17.5 SD and females one of 42.7±15.9 SD, with a statistically significant difference (t=6.775, p=<0.0001; t-test).

The data from the second administration at T1 confirmed the statistically significant difference between the two genders in total and dimension BEES scores (t= 5.426, p<0.0001; t-test) (Table 5).

Discussion

This research analysed the empathic tendency among nursing students and its change during the progress of the nursing course. In our study, the mean score of empathetic tendency was found to be slightly higher (37.1±19.5 SD) among the students at the beginning (T0) of their nursing course if compared to the standardized samples identified by the Italian BEES

Table 2. Total empathy and empathy by dimension for the longitudinal group, at T0 and T1

BEES Scores	Longitudinal group n=99 T0 Mean (SD)	Longitudinal group n=99 T1 Mean (SD)
D1: Impermeability to the emotional feelings of others	-7.4 (5.9)	-6.0 (7.0)
D2: Susceptibility to the emotional feelings of others	10.8 (4.1)	10.6 (4.7)
D3: Emotional spread responsiveness	-0.69 (5.3)	-1.45 (8.9)
D4: Susceptibility to emotional involvement with people nearby	11.0 (4.9)	10.9 (4.9)
D5: Tendency to avoid emotional involvement with fragile people	-3.1 (2.5)	-2.4 (3.0)
Total	37.1 (19.5)	33.5 (22.6)

Table 3. Median empathy values for the longitudinal group, at T0 and T1

N=99	Median (2.5-97.5 percentile)		
	T0	T1	p-value
D1: Impermeability to the emotional feelings of others	-7.5 (-20; 3)	-6 (-18; 9)	0.188
D2: Susceptibility to the emotional feelings of others	11 (3; 18)	11 (-1.5; 18)	0.790
D3: Emotional spread responsiveness	-1 (-10; 11)	-2 (-20; 17)	0.470
D4: Susceptibility to emotional involvement with people nearby	11 (-3; 18)	11 (1; 18)	0.976
D5: Tendency to avoid emotional involvement with fragile people	-3 (-8; 2)	-3 (-7.5; 5)	0.102
Total	39 (-15; 71)	34 (-15; 71)	0.325

Table 4. Mean empathy scores at T0 for the initial group, separated by gender

Score	Gender (n=118)		
	Male	Female	p-value
D1: Impermeability to the emotional feelings of others	-3.0 (5.3)	-8.7 (5.5)	<0.0010
D2: Susceptibility to the emotional feelings of others	7.4 (3.6)	11.6 (3.7)	<0.0010
D3: Emotional spread responsiveness	3.2 (4.5)	-1.7 (5.0)	<0.0010
D4: Susceptibility to emotional involvement with people nearby	8.0 (5.5)	11.8 (4.6)	0.0070
D5: Tendency to avoid emotional involvement with fragile people	-1.9 (2.7)	-3.7 (2.4)	0.0019
Total	17.4 (17.5)	42.7 (15.9)	<0.0001

Table 5. Mean empathy scores at T1 for the longitudinal group, separated by gender

Score	Gender (n=99)		
	Male	Female	p-value
D1: Impermeability to the emotional feelings of others	-2.3 (6.4)	-7.2 (6.8)	0.0018
D2: Susceptibility to the emotional feelings of others	7.6 (5.8)	11.6 (3.8)	0.0002
D3: Emotional spread responsiveness	3.1 (5.5)	-1.2 (5.9)	0.0018
D4: Susceptibility to emotional involvement with people nearby	8.3 (4.2)	11.8 (4.8)	0.0011
D5: Tendency to avoid emotional involvement with fragile people	-1.5 (3.7)	-2.7 (2.6)	0.0073
Total	15.0 (20.3)	40.0 (20.0)	<0.0001

study validation: adults between 20 and 24 years of age (25.5±21.0 SD) and nurses (32.0±18.0 SD) (49). Our result indicates an higher level of empathy if compared to other recent Italian studies conducted among nursing students (36, 37). In this regard, the literature put in evidence that the undergraduate nursing students generally show a significantly higher mean score of empathy than the students attending other undergraduate courses (26, 41, 51). This could be explained by the fact that students who choose to attend nursing course probably have a particular aptitude or motivation for helping relationship, which represents a key aspect of the nursing profession (26, 52, 53).

At the time of our second survey (T1), the mean empathy score appeared slightly decreased in comparison with the beginning of study course, although no statistically significant difference came to light. There are no longitudinal studies of empathy among Italian nursing students with which we can compare this result. The comparison with the international studies, which have analysed this issue, is not reliable because they were conducted using different evaluation instruments and in different educational contexts. With these precautions, we highlight that our findings are in line with those of other studies of health-science and nursing courses that have reported a decline in empathy over the course of study (34, 41-46). Nunes et al., when comparing mean empathy scores at the beginning and at the end of the first academic year, found that students in all five health-science disciplines showed a decrease in empathy scores from the beginning to the end of school, with a statistically significant decline for dental, nursing, and medical students (41). In addition, also a cross-sectional study conducted within the university nursing programme in Seville revealed a progressive decline in empathy as the course of study progressed (34). This is in contrast with the studies conducted by Williams et al. (27, 51), and McKenna et al. (40) in Australian nursing schools, which found no decrease in empathy.

Nunes et al. suggested that the decline in empathy scores during the first year of training is in part due to a 'settling in' effect. Whereas, on entry, the

students are eager to show that they have the positive attributes of a compassionate healthcare provider, their idealism becomes less evident as the year progresses (41). Cunico et al., meanwhile, hypothesized that, since Evidence Based Practice focuses heavily on scientific, technological, diagnostic, and therapeutic approaches to healthcare, it therefore leads students to lose their human and empathetic perspective on the patient-provider relationship (36). Finally, in a longitudinal study conducted on 214 undergraduate nursing students who were exposed more than others to patient encounters during the study period, Ward et al. observed a statistically significant decline in empathy (43). Our findings are consistent with most studies which highlighted that medical and nursing students, who have to frequently encounter patients, can show a decline in empathy tendency due to their empathic engagement in the patients sufferance (44, 46).

Our study suggested a gender difference in empathy attitude and tendency, showing that female students reported a statistically significant higher mean BEES empathy score in comparison with male students. This gender difference can be found also in the standard samples: adults between the ages of 20 and 24 (Females 34.0±20.0 SD, Males 16.5±18.5 SD) and nurses (Females 35.0±17.5 SD, Males 19.5±15.5 SD) (49). However, in our sample, this difference was more pronounced (Females 40.0±20.0 SD, Males 15.0±20.3 SD). These results are consistent with those of other studies (27, 30, 33-37, 51), in which women consistently recorded higher empathy scores, probably due to greater emotional resonance to others' feelings and more sensitivity to interpersonal stimuli probably due to biological and social conditioning (30). According to Williams et al., the traditional and evolutionary role of women as caregivers may also explain the variation in empathy level between males and females, indicating that females are more perceptive to emotions and males take a more rational rather than emotive approach with others (27).

Conclusions

Our preliminary data suggest a slight decline in empathy tendency among nursing students between the beginning and the mid-point of their undergraduate education, confirming other previous studies. Further study extended to the longitudinal study of nursing course is essential to confirm the empathic decline tendency. If a decline in empathy scores is confirmed, further research would be necessary in order to analyse the causes and verify whether this tendency is related to the clinical training, which exposes students to an overwhelming experience with patient suffering.

Limits and advantages

This study has many limits. It was conducted in only one Italian university, so its results cannot be generalised. The observation period should be extended to the total period of nursing course, as our research planned project. Although the scale evaluates a self-report measure of empathy, it is easily and time efficient to administer. Nevertheless, our research study is one of few longitudinal studies, and certainly the only one Italian study, on student empathy. Our longitudinal findings provide important information that could help us to better understand the capacity of students to maintain and develop, during the nursing course, an empathic attitude towards patients, fundamental condition for any therapeutic approach.

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