Anxiety and depression in Nursing students during Oncology internship

Ansiedade e depressão em alunos de Enfermagem durante o estágio de Oncologia

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ABSTRACT

Objective: To identify the degree of depression and anxiety in Nursing students during their Oncology internship. Methods: Thirty-eight Nursing students (third year) participated in the survey. Data were obtained by sociodemographic information and past medical history; anxiety and depression scale; and difficulties faced during the internship. Results: The Hospital Anxiety and Depression Scale showed that 57.89% (22) corresponded to non-cases and 42.10% (16) to possible or probable cases of anxiety; of these, 75% (12) had or had had cases of cancer in the family. The scale further showed that 65.78% (25) corresponded to non-cases and 34.21% (13) to possible or probably cases of depression; and of these, eight (61.53%) had or had had cases of cancer in the family. Conclusions: The anxiety rate was significantly higher in the group with family cases of cancer. As to depression, no difference was found between the groups.

Keywords: Anxiety; Depression; Medical oncology; Education, nursing; Students, nursing

INTRODUCTION

Anxiety is an emotional state inherent to the human psyche. A daily-life experience that may occur in any person, it can be beneficial as it stimulates actions intended to circumscribe danger. On the other hand, there are people who feel incapable of carrying out their routine tasks or even leaving their homes. Prevalence of depression is also higher among individuals with anxiety disorders. Most cases of depression are secondary to other psychiatric diseases and anxiety disorders are the most common primary disorders(1).

People face anxiety daily. The terms “stress” and “anxiety” are, many times, used interchangeably, but they are not synonymous. Stress, or a stress factor, is an external pressure exerted on the individual. Anxiety is the subjective response to this stress factor(1).

Depression, probably one of the most ancient experiences, is still one of the most frequently diagnosed psychiatric diseases. The etiology of depression has not yet been made clear and its symptoms may be described as changes in four spheres of human function: affective, behavioral, cognitive and physiological(1).

The responsibility and the effort in caring for critically ill terminal patients is very demanding, both physically and emotionally, for Healthcare students and professionals. Anxiety and depression are manifested as a form of stress in face of activities for which the students often do not feel prepared².

In the Healthcare professions, anxiety tends to be more common, since these professionals deal with human suffering and death, which are highly stressful.
situations. Anxiety, because of the risk or actual occurrence of death, is prevalent, universal, and difficult to resolve\(^{(3)}\).

In Brazil, the Instituto Nacional do Câncer (INCA) estimated a total of 472,050 new cases of cancer for 2006. Besides non-melanoma skin cancer, the most frequent types are those affecting the prostate and lungs in males, and breast and uterine cervix in females, accompanying the same magnitude profile noted worldwide. Of the total number of new cases, 234,570 were expected for men and 237,480 for women\(^{(4)}\).

The projection of new cases of cancer and the appearance and expansions of hospital units specific for the treatment of cancer patients have generated the need for a more aggressive inclusion of Oncology in the graduate Nursing School syllabus. If, on the one hand, this attitude on the part of Nursing Schools offers a better preparation of the student for the specialty, on the other hand, it intensifies the emotional burden due to the students’ proximity with cancer patients and their families.

Although scarce, studies have confirmed that professionals who work in Oncology may require great mental and affective investments, since they have ongoing contact with patients for whom there is no possibility of treatment\(^{(5-6)}\).

Treatment of cancer requires technical and scientific skills and competencies, as well as attributes in interpersonal and spiritual relationships. This is a complex area of knowledge, since it is subject to constant innovations and, therefore, the Oncology nurse should be constantly keeping abreast of them\(^{(7)}\).

These factors, associated with the nature of cancer as a disease, the complexity of treatments, the care of emotionally labile patients, the high complexity of patient care, the intense involvement with patients and their family members and the interdisciplinary and ethical conflicts are all considered stress factors in Oncology\(^{(5-6)}\).

The expectations of Nursing students in clinical internship rotations are of fear, tension and anxiety. Before their first performance, they do not know what awaits them and are not familiar with the routines of the area and with what is and is not acceptable. Additionally, there is evidence that certain attitudes on the part of a supervisor can inhibit the development of students in the practice of their activities. It is also known that students who display a state of high anxiety cannot and must not be ignored\(^{(8)}\).

Professors involved in the Oncology teaching and learning processes need to show this specialty to their students in a real and objective way. To work in the area of Oncology, it is not enough to have technical and scientific knowledge; the professional needs to master other areas as well, such as interpersonal relationships\(^{(7)}\).

In face of all this, it is vital to survey the incidence and the prevalence of anxiety and depression states in Nursing students during their internships in specialized Oncology centers. The students are young, and therefore, usually immature, with little or no familiarity with pain or an imminent risk of death\(^{(9)}\). The information resulting from this study may favor the implementation of preventive and therapeutic strategies that seek to avoid, minimize or cure such emotional disorders.

**OBJECTIVE**

To identify the rate of depression and anxiety in graduate Nursing students during their internship in Oncology and to identify, by attribution of a score, the greatest difficulties that they encountered.

**METHODS**

**Type of study**

This was a descriptive exploratory level 1 study with a quantitative approach.

**Population/sample**

The research subjects were students enrolled in the third year of the graduate Nursing course of Faculdade de Enfermagem do Hospital Israelita Albert Einstein (HIAE) during their Nursing internship in Oncology (n = 38).

The following subject inclusion criteria were adopted:

- be enrolled in Faculdade de Enfermagem do HIAE;
- first participation in the discipline Nursing in Oncology;
- be in the ninth day of the curricular internship in Oncology;
- be available and provide consent for participation in the research project after signing the informed consent form.

**Field of study**

The teaching-learning process of the Nursing in Oncology discipline has a class-load of 120 hours – 60 in theory and 60 in curricular internship at a hospital specialized in Oncology. Areas included are the clinical oncology unit and chemotherapy/radiation therapy outpatient clinic, seeking to capacitate students in giving Nursing assistance in Cancerology and to develop affective skills in the psycho-social relationship between the nurse and the patient and his/her family.

**Data collection tool**

A three-part data collection instrument was used:

1. Sociodemographic and morbidity data: age and tracking of cancer cases in the family.
2. Hospital Anxiety and Depression Scale (HAD), as per Zigmond and Snaith, validated by Botega et al. This scale consists of two subscales, one for anxiety (HAD-A) and another for depression (HAD-D), and each one comprises seven multiple-choice questions. The total HAD score varies from 0 to 42 points, where 0 to 21 are for HAD-A, and 0 to 21 for HAD-D. Score value interpretation was made according to Zigmond and Snaith guidelines. Thus, a score between 0 and 7 was interpreted as a non-case of depression or anxiety; a score between 8 and 10, as a possible case; and a score between 11 and 21, as a probable case. The HAD score was initially developed for application with “patients from non-psychiatric centers”. The translation of this scale into Portuguese was made with permission of its authors and was carried out by a psychiatrist who was trained in the United Kingdom. Two bilingual laypersons, that have English as their mother tongue, retranslated the instrument into English, and a consensus result was reached.

3. Scoring according to difficulties encountered in the Oncology Nursing internship
With the objective of identifying the possible difficulties found during the Oncology internship, a chart was designed composed of 15 difficulties (Chart 1) resulting from a survey conducted prior to the present data collection with fourth-year students, presented with the question “what was difficult for you during your Oncology internship?” The present survey resulted in a listing with which third-year students rated difficulties faced during their Oncology internship using a scale from 0 (no difficulty) to 10 (maximum degree of difficulty). The present study also allowed the inclusion of other difficulties different from those identified in the prior survey with fourth-year students.

Data collection
Data were collected after approval of the project by the Scientific Committee of Faculdade de Enfermagem and by the Research Ethics Committee of the HIAE.
Aimed to accurately investigate the difficulties found during the Oncology internship, data were collected, for all three groups, on the ninth day of internship practice when the students had already gone through daily rotations by the teachers in the following clinics: dressing clinic, chemotherapy clinic, radiation therapy clinic and admission unit.

Statistical analysis
The results were analyzed by descriptive statistics and presented as tables and figures, with absolute numbers and percentages. To increase veracity of the values obtained, the p value was used to quantify significance.

RESULTS
All 38 students enrolled in the third year participated. They were divided into three internship groups: two groups with 12 students each (Group 1 and Group 3) and one group with 14 students (Group 2). At an earlier phase, with the objective of identifying the difficulties felt when they went through the Oncology internship, 23 students enrolled in the fourth year participated (60.52% of students of that year).

Figure 1 shows the distribution of third-year students, according to chronological age.

The HAD was applied to analyze the students according to the intensity of their symptoms. The results were presented globally, with the total of third-year students (Table 1), and separately, according to the internship group (Table 2).

<table>
<thead>
<tr>
<th>Score</th>
<th>HAD-A*</th>
<th>HAD-D**</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-7 non-case</td>
<td>22</td>
<td>57.89</td>
</tr>
<tr>
<td>8-10 possible case</td>
<td>7</td>
<td>18.42</td>
</tr>
<tr>
<td>11-21 probable case</td>
<td>9</td>
<td>23.68</td>
</tr>
<tr>
<td>Total</td>
<td>38</td>
<td>100</td>
</tr>
</tbody>
</table>

*HAD-A: anxiety scale; **HAD-D: depression scale

Table 2. Anxiety scale (HAD-A) per score of students of each Oncology internship group

<table>
<thead>
<tr>
<th>Internship groups</th>
<th>Number of students</th>
<th>Non-case</th>
<th>Possible case</th>
<th>Probable case</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st group</td>
<td>12</td>
<td>6</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>2nd group</td>
<td>14</td>
<td>9</td>
<td>1</td>
<td>4</td>
</tr>
<tr>
<td>3rd group</td>
<td>12</td>
<td>7</td>
<td>3</td>
<td>2</td>
</tr>
</tbody>
</table>

The third-year students rated the difficulties they faced during internship on a 0 to 10 scale, structured according to the difficulties observed by fourth-year students (Chart 1).
Age of the students varied between 20 and 29 years; 12 students were 22-23-year old, five students were 24-25-year old, and one student was 29 years old. Figure 1 shows that most students comprising the sample were aged 20-21 years.

The results presented on Table 1 – the scores obtained on the HAD scale by the students – show that most of the students had scores between 0 and 7 on both scales (HAD-A, 57.89%, and HAD-D, 65.78%), corresponding to non-cases of anxiety and depression. The students had scores of 8 to 10 (possible cases) and 11 to 21 (probable cases) relevant both for anxiety (42.10%) and for depression (34.21%). The classification of the scores obtained by the students on the anxiety scale (HAD-A) in each internship group, separately, according to Table 2, showed that six students from the first group (50%), five from the second (35.70%) and five from the third (41.70%) presented scores compatible with possible cases and probable cases. On the other hand, Table 3 classified the scores obtained by the students on the depression scale (HAD-D) in each internship group, showing that five students from the first group (41.70%), six from the second (42.80%) and two from the third (16.70%) showed scores compatible with possible cases and probable cases.

The 38 research subjects were distributed into two distinct groups according to the presence of cancer in their own families. Table 4 shows the classification of anxiety scores obtained correlating with the presence of cases of cancer in their families. Of the 16 students considered possible cases and probable cases for anxiety, 12 (75%) had or had had cases of cancer in their families and only four students (25%) who reported not having cases of the disease in their families were considered possible cases and probable cases. The same distribution was made with the scores obtained for depression on Table 5. The subjects were distributed into two groups, according to the presence of cancer cases in their families: 13 students were considered possible cases and probable cases of depression; of these, eight (61.53%) had or had had cases of cancer in their families and five (38.46%) had no cases in their families.

**Table 4. Distribution of students according to the anxiety scale obtained correlating with the presence of cases of cancer in their families**

<table>
<thead>
<tr>
<th>Cases of cancer in the family</th>
<th>Non-case</th>
<th>Possible case</th>
<th>Probable case</th>
</tr>
</thead>
<tbody>
<tr>
<td>No cases of cancer in the family</td>
<td>12</td>
<td>1</td>
<td>3</td>
</tr>
</tbody>
</table>

**Table 5. Distribution of students according to the depression scale obtained correlating with the presence of cases of cancer in their families**

<table>
<thead>
<tr>
<th>Cases of cancer in the family</th>
<th>Non-case</th>
<th>Possible case</th>
<th>Probable case</th>
</tr>
</thead>
<tbody>
<tr>
<td>No cases of cancer in the family</td>
<td>11</td>
<td>4</td>
<td>1</td>
</tr>
</tbody>
</table>

Chart 1 shows that, considering a total score of 450, the items that reached up to 50% of value, i.e., the most significant difficulties pointed out by the students were: “living with end-stage patients”, “the beginning of the internship”, “dealing with death”, “dealing with children who have cancer”, “fear of making a mistake”, “emotional involvement” and “fear of what I might encounter.” The difficulty with the highest score was “living with the terminal patient” and the one with the lowest score was “lack of affinity with the teacher.”

**DISCUSSION**

The survey identified most students as young, with little familiarity with the risk of death and suffering of patients and families with cancer. Although these students had already been through disciplines of the professionalizing cycle, this was the first academic contact with patients hospitalized in a clinic specific for cancer treatment. These results showed that the students who did their Oncology internship in Group 1 presented a higher incidence of anxiety when compared to those of the other two groups. One likely rationale for this is the fact of its being the first group to go through the Oncology internship and not being able to count on the reports of experiences of other colleagues. Additionally, the fact
of their being young contributed to greater emotional instability in face of the situations encountered.

Oncological treatment is complex, long-range and involves the patient, the Healthcare team and their families, generating different sources of stress\(^{(12)}\). In other words, the group with cases of cancer in their families had three times as many students considered possible and probable cases. Statistical tests confirmed that the proportion of anxiety cases among the students with cancer in their families is greater than among those whose families are not affected by cancer.

Anxiety is a normal reaction to stressful and traumatic events (dealing with the disease, radiation treatment, chemotherapy, hair loss, among others) that affect the cancer patient, the multiprofessional team and their families as a whole.

The diagnosis of depression, on the other hand, considering a disease such as cancer, is not easy. During critical moments, such as at the time of diagnosis, while awaiting treatment or surgery, or in the terminal stage of the disease, symptoms may intensify and compromise the quality of life of the patient and his family members. This can affect the graduate Nursing student and the Healthcare professional, since they are present in situations when bad news is transmitted, such as when the diagnosis of cancer is made, when the disease relapses, in situations of specific care, among so many others\(^{(12)}\). For depression, the group of students with cancer in their families showed almost twice the rate of probable and possible cases of depression when compared to the other group. Statistical tests, however, did not confirm statistically significant differences between the two groups of students (with and without cases of cancer in their families).

In a group of nurses who work in Pediatric Oncology, it was shown, by means of questionnaires, that the activities they carry out are stressful for 54\% and very stressful for 22\% of the group. Dealing with children with an imminent risk of death, bonding with a child and discovering the next day that the child has died, having daily contact with the patients’ family members, with their anguish and suffering in these situations are some of the many stressful situations that nurses face as a whole. Nevertheless, care, affection, dedication and love for their work lead them to choose this professional area\(^{(13)}\). A descriptive study reported that the quality of life of students during a course in Oncology and chemotherapy decreased significantly, showing the psychic impact of this subject. Some students had no prior experience with oncology patients and, visibly shaken with their patients’ situations, were saddened to the point of being affected in their daily routines\(^{(14)}\).

The third-year students rated from 0 (no difficulty) to 10 (maximum degree of difficulty) the difficulties they faced during their Oncology internship. The results show that the difficulties faced by the third-year students were the same as those encountered by the fourth-year students, according to the prior survey. This conclusion was corroborated by the fact that no student added other difficulties to the list besides those suggested.

Thus, for the next Oncology internship groups, there is a suggestion that the coordinators and teachers of the discipline encourage the students who have or had cases of cancer in their families during a phase prior to beginning the internship to seek the help of psychologists as a means of preparation for the work they will be doing. The efforts of a multidisciplinary team (coordinator, psychologist and teacher) might help to reduce such numbers and percentages of students in this process. Emotional preparation of the Nursing student is of great importance for his/her professional competence. Additionally, it is desirable that the supervisor note the instances when the student manifests anxiety or depression, so that the appropriate measures may be taken. The ideal situation would be if Nursing teachers were capable of minimizing the students’ states of anxiety and depression in order to adopt preventive and therapeutic strategies\(^{(15)}\).

**CONCLUSIONS**

The rate of anxiety was significantly higher in the group of students who had or had had cases of cancer in their families. As to depression, no statistically significant difference was found between the two groups. This might show a greater susceptibility of the students exposed to their own family histories of cancer in presenting greater symptoms of anxiety during the Oncology internship. However, further studies with greater methodological rigor are necessary, as well as longer follow-up periods and larger samples in order to confirm these affirmations. Therefore, this study may serve as a basis for new research on the subject.

**REFERENCES**