Journal of Nursing
Revista de Enfermagem
UFPE On Line
ISSN: 1981-8963

ORIGINAL ARTICLE

KNOWLEDGE OF NURSING STUDENTS WITH TECHNICAL-PROFESSIONAL TRAINING ON ALZHEIMER'S DISEASE

CONHECIMENTO DE ESTUDANTES DE ENFERMAGEM COM FORMAÇÃO TÉCNICO-PROFISSIONALIZANTE SOBRE A DOENÇA DE ALZHEIMER

CONOCIMIENTO DE ESTUDIANTES DE ENFERMERÍA CON FORMACIÓN TÉCNICO-PROFESIONAL ACERCA DE LA ENFERMEDAD DE ALZHEIMER

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ABSTRACT

Objective: to evaluate the knowledge of Nursing undergraduate students, with technical-professional training in nursing, on Alzheimer's disease. ***Method:*** descriptive, exploratory, study with a quantitative approach, carried out in a private university in the state of Sao Paulo. The population consisted of 45 undergraduate students, the data collection was conducted with a questionnaire and they were analyzed through descriptive statistics, after the approval of the project by the university's Research Ethics Committee, under the CAAE 1042.0.251.000-11. ***Results:*** in the analysis of answers on the concept of Alzheimer's disease, 1 student (2.2%) failed to define the disease, 18 students (40.0%) stated to know the disease, but defined it incorrectly, 2 students (4.4%) stated to know the disease and defined it correctly, and 18 students (40.0%) stated to know the disease, but defined it in an incomplete way. ***Conclusion:*** respondents presented an unsatisfactory performance, since only 2 (4.4%) defined the disease correctly and 5 (11.1%) specified the care needed by the person with Alzheimer's disease. ***Descriptors:*** Nursing; Elderly Health; Alzheimer's Disease.

RESUMO

Objetivo: avaliar o conhecimento de graduandos de Enfermagem, com formação técnico-profissionalizante em enfermagem, sobre a doença de Alzheimer. ***Método:*** estudo descritivo, exploratório, com abordagem quantitativa, realizado em uma universidade privada do estado de São Paulo. A população foi de 45 graduandos, a coleta de dados foi realizada com questionário e eles foram analisados por meio da estatística descritiva, após a aprovação do projeto pelo Comitê de Ética em Pesquisa da universidade, sob o CAAE n. 1042.0.251.000-11. ***Resultados:*** na análise das repostas sobre o conceito da doença de Alzheimer, 1 discente (2,2%) não conseguiu definir a doença, 18 discentes (40,0%) afirmaram conhecer a doença, mas a definiram de forma incorreta, 2 discentes (4,4%) afirmaram conhecer a doença e a definiram de forma correta, e 18 discentes (40,0%) afirmaram conhecer a doença, mas a definiram de forma incompleta. ***Conclusão:*** os pesquisados apresentaram desempenho insatisfatório, já que somente 2 (4,4%) definiram de forma correta a doença e 5 (11,1%) especificaram a assistência necessária ao portador de Alzheimer. ***Descritores:*** Enfermagem; Saúde do Idoso; Doença de Alzheimer.

RESUMEN

Objetivo: evaluar el conocimiento de graduandos de Enfermería, con formación técnico-profesional en enfermería, acerca de la enfermedad de Alzheimer. ***Método:*** estudio descriptivo, exploratorio, con abordaje cuantitativo, realizado en una universidad privada en el estado de São Paulo. La población fue de 45 graduandos, la recogida de datos fue realizada con cuestionario y los mismos fueron analizados por medio de la estadística descriptiva, después de la aprobación del proyecto por el Comité de Ética en Investigación de la universidad, bajo el CAAE 1042.0.251.000-11. ***Resultados:*** en el análisis de las respuestas acerca del concepto de la enfermedad de Alzheimer, 1 discente (2,2%) no logró definir la enfermedad, 18 discentes (40,0%) afirmaron conocer la enfermedad, pero la definieron incorrectamente, 2 discentes (4,4%) afirmaron conocer la enfermedad y la definieron correctamente, y 18 discentes (40,0%) afirmaron conocer la enfermedad, pero la definieron incompletamente. ***Conclusión:*** los encuestados mostraron desempeño insatisfactorio, ya que sólo 2 (4,4%) definieron correctamente la enfermedad y 5 (11,1%) especificaron la atención necesaria a la persona con Alzheimer. ***Descriptores:*** Enfermería; Salud del Anciano; Enfermedad de Alzheimer.

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INTRODUCTION

In Brazil and the other countries, one has witnessed a significant increase in human longevity, as well as a decrease in the birth rate, causing a relevant increase in the number of elderly people. The Brazilian population over 60 years of age was 4.9% in 1950, a percentage which increased to 10.2% in 2010. With a growing annual increase in this population, at a 3.2% rate per year, compared to 0.3% of the total population, one estimates that by 2050 the number of elderly people in Brazil will be 64 million, 29.7% of the total population.[1-2]

Regarding the population's aging, the types of disease which have age as the main risk factor increase, reaching the dimensions of an epidemics.[3] The authors exemplify this with Alzheimer's disease (AD), that, in Western countries, can become the main cause of dementia in the population, and it constitutes the third largest cause of disability and mortality in the age group from 75 to 84 years. Although statistics are inaccurate in Brazil, one estimates that about 1.2 million people are victimized by the disease. AD constitutes, all around the world, like other forms of dementia, a serious public health problem.[3-4]

AD, regarded as neurodegenerative, has a little significant incidence until 60 years of age and it exponentially increases in importance over time. From the age of 65 years, its prevalence double every 5 years. Within the period between 60 and 64 years, a prevalence of 0.7% is recorded, which increases to 5.6% between 70 and 79 years, reaching 38.6% in individuals over 90 years. Even in the very old age group, the incidence shows no signs of decrease.[5-6]

The AD's etiology is still unknown, despite there're significant advances in the understanding of its pathogenesis. It's histopathologically characterized by two main lesions, namely: senile plaques containing the b-amyloid protein; and neurofibrillary tangles. In family and early cases there's evidence of autosomal dominant mutation of the amyloid precursor protein, presenilin 1 and presenilin 2. The family type totals only 5% of cases of the disease, and the sporadic type is prevalent in 95% of cases.[7]

Not only age constitutes a risk factor for AD, but also family history and the genetic factor, inheritance of some allelic types of genotyping or gene coding for apolipoprotein E. Other possible risk factors have been studied, but they're debatable, such as, for instance, being female, presenting a thyroid disease, exposure to toxins, low educational level, skull fracture, and late depression onset. Currently, one takes into account the genetic causes, as well as their interaction with one or many factors, both due to environmental predisposition and those related to age.[7-8]

AD is a progressive and irreversible neurodegenerative disorder characterized by memory loss and cognitive and motor disorders, with insidious onset. The progression of symptoms can vary from person to person, not manifesting itself exactly in the same manner and order for all. In general, the disease's progression occurs in a gradual and continuous way.[9]

Initially, there's memory loss, inattention, lack of concentration, depression, or agitation; it's when the individual starts having difficulties for learning and performing tasks. At this stage, the individual usually loses personal objects and forgets food on the stove, forgets the name of familiar people, faces, and familiar places.[10]

Later, with the evolution of AD, the patient has a more impaired and damaged memory and there also emerges the focal symptoms, such as aphasia, apraxia, and agnosia. The individual shows personality changes and, gradually, loses the critical sense. It's possible she/he shows to be restless, agitated, aggressive and have sleep disturbances, hallucinations, paranoid ideas, and change in posture and gait. One stresses that, as the disease progresses, the individual loses her/his ability to perform everyday tasks, becoming dependent on a caregiver.[10-1]

In an advanced stage, the individual no longer recognizes relatives, loses, in a devastating manner, her/his cognitive functions, and she/he will need constant and increasingly complex care procedures, where systemized actions are a must, prioritizing those that relate to everyday activities and prevention of disabilities and complications, always along with the relatives. For this, the nursing professional should be able to join the multidisciplinary team and contribute to the planning of care procedures, based on health education, in order to be able to give support and assistance in the intra and extra-home care.[12-3]

It's part of the nursing professional's function to guide the adaptation of care procedures to the elderly person's gradual dependence and the instrumentalization of relatives to care for her/him, always encouraging self-care and maintenance of her/his self-esteem in the elderly person's relationship with the family.[12]

The nursing professional should also focus the care for the family caregiver, because she/he assumes such a strong physical and emotional work overload that it, often, results in damage to her/his health, interfering with the quality of a dependent elderly person's care.[10,12,14]

From this perspective, the relevance of this paper for the nursing professional derives from the fact that she/he is one of the specialists providing assistance to AD patients, as well as guidance for caregivers and relatives. For this, she/he should focus her/his skill on the systematized evaluation of signs and symptoms, as well as interact with the interdisciplinary team, in order to identify along with the other professionals the client's priorities.

The motivation for this research derived from the fact that it's a broad theme, of utmost importance, current, due to population aging, as previously mentioned, since it's a treatment which requires much study, knowledge, and because of its severity due to its "irreversible" and "incurable" nature.

Given the above, this study aims to evaluate the knowledge of undergraduate Nursing students, with technical-professional training in nursing, on AD.

METHOD

Descriptive, exploratory, prospective study, with a quantitative approach, carried out in a private university in the state of Sao Paulo. This institution offers undergraduate and graduate courses in various areas, the undergraduate Nursing course is acknowledged by the Ministry of Education since 2001, with a 4-year length, divided into 8 semesters, currently it has a total of 262 students enrolled, in the unit under study, and 49 of these students attended the Nursing Assistant or Nurse Technician course.

The choice of subjects followed these criteria: be regularly enrolled in the undergraduate Nursing course of the institution under study, have attended the Nursing Assistant or Nurse Technician course at least one year before, agree to participate in the research, and sign the Free and Informed Consent Term.

For data collection, a questionnaire prepared by the research's authors was used, with a total of 13 questions, made up by the subjects' characterization data and questions on the elderly health teaching during the undergraduate course, whether they provided nursing care to an AD patient, whether they had contact with an AD patient at work, whether they know how to conceptualize AD, whether they had information on the disease during their technical training, and what nursing care procedures are specific to this population. The questions were prepared in accordance with current scientific literature aimed at the care for AD patients.

Initially, the research project was submitted to the Research Ethics Committee of the institution under study, under the CAAE 1042.0.251.000-11, receiving a favorable opinion, according to the Protocol 133/2011. There was also a formal request for authorization to collect data to the Coordination of the Undergraduate Nursing Course of the university, with access to the Political and Pedagogical Project of the undergraduate Nursing course.

DATA ANALYSIS

The sample characterization data and those related to the research's purpose, that is, identify the knowledge level of undergraduate Nursing students, with technical training, on AD, underwent descriptive statistics analysis.

To establish the correlation and analysis of questions 12 and 13 five indicators were prepared by the authors. They're indispensable properties, which any indicator must necessarily present: relevance (portraying an important and essential aspect); gradation of intensity; portray with complete clarity a unique and well defined aspect of the issue; and standardization.[15]

The indicators of question 12, which addressed the concept of AD, were: stated not to know the disease; stated to know the disease, but defined it incorrectly; stated to know and define it correctly; stated to know, but defined it incompletely; and didn't answer to the question.

One regarded as a complete and correct definition of AD being a progressive and irreversible neurodegenerative syndrome, characterized by memory loss, cognitive and motor disorders, with progression of symptoms in a gradual and continuous way.

The indicators of question 13 on the specific nursing care for AD patients were: addressed only the nursing routines; correctly specified the care needed by AD patients; incorrectly answered to the question, since didn't mention nursing care; incompletely specified care; and didn't answer to the question.

One considered as correct and complete the care provided to AD patients on the part of the respondents who reported that the nursing care for the elderly person is focused

on health education, on caring based on the knowledge of the aging and senility process and on the functional ability resume. One also mentions that the actions taken should be directed to a rehabilitation process which promotes self-care and, in this process, the action needs to be taken along with other professionals and the patient's relatives to support the decisions made in the treatments offered.

RESULTS

The survey results are presented below, according to the variables of the group under study.

Table 1 presents the results of variables related to the sociodemographic characterization of the undergraduate students.

Table 1. Sociodemographic characteristics of undergraduate students. Santana de Parnaiba (SP), 2012

Age (years)		
Average	29.7	
Minimum-maximum	20-46	
Age group		
- 20 to 24	4	8.9%
- 25 to 29	14	31.1%
- 30 to 34	4	8.9%
- 35 to 39	2	4.4%
- 40 to 44	1	2.2%
- 45 to 49	2	4.4%
- Not informed	18	40.0%
Gender		
- Female	38	84.4%
- Male	7	15.6%
Marital status		
- Single	22	48.9%
- Married	15	33.3%
- Divorced	2	4.4%
- Widower	1	2.2%
- Not informed	5	11.1%
Training		
- Nursing Assistant	4	8.9%
- Nursing Technician	41	91.1%
Time since graduation		
- Up to 1 year	3	6.7%
- From 2 to 3 years	4	8.9%
- From 4 to 5 years	14	31.1%
- More than 6 years	19	42.2%
- Not informed	5	11.1%
Undergraduate course semester		
- 1st semester	4	8.9%
- 2nd semester	2	4.4%
- 3rd semester	11	24.4%
- 4th semester	1	2.2%
- 5th semester	3	6.7%
- 6th semester	0	0.0%
- 7th semester	9	20.0%
- 8th semester	8	17.8%
- Not informed	7	15.6%
Works in the nursing area?		
- Yes	40	88.9%
- No	5	11.1%

One interviewed 45 students, out of whom 38(84.4%) were female and 7(15.6%) were male. The average age of undergraduate students was 29.7 years, and the age group from 25 to 29 years (31.1%) prevailed. Regarding marital status, 22 (48.9%) reported being single, 15(33.3%) married, 2 divorced (4.4%), 1(2.2%) widower, and 5 (11.1%) didn't say anything.

Regarding the technical-professional training, 4(8.9%) were nursing assistants and 41(91.1%) were nursing technicians. The average time since graduation of respondents was 13.4 years, and 3(6.7%) students had 1 year of training, 4(8.9%) students had from 2 to 3 years of training, 14(31.1%) students had from 4 to 5 years of training, 19 (42.2%) students had more than 6 years of training, and 5(11.1%) didn't say anything.

Regarding the undergraduate course semester, 4(8.9%) students are from the 1st semester, 2(4.4%) students are from the 2nd semester, 11(24.4%) students are from the 3rd semester, 1(2.2%) student is from the 4th semester, 3(6.7%) students are from the 5th semester, 9(20.0%) students are from the 7th semester, 8(17.8%) students are from the 8th semester, and 7(15.6%) students didn't say anything.

About working in the field of nursing, 40(88.9%) stated to work in the area and 5

(11.1%) don't work as nursing assistant or technician.

Table 2 presents the results related to the fact that the undergraduate students have attended the discipline of Elderly Health Nursing. In her/his job, internship, or family she/he has already provided or provides care for a person with AD, had access to information on AD during her/his technical-professional Nursing training, and know how to conceptualize AD.

Table 2. Knowledge on Alzheimer's disease of undergraduate students who provided/provide care to a person with Alzheimer's and had access to information on Alzheimer's disease during their current undergraduate course and/or technical-scientific Nursing training. Santana de Parnaiba (SP), 2012

Attended the discipline of Elderly Health Nursing during the undergraduate course?		
Yes	25	55.6%
No	20	44.4%
Have you already provided nursing care to a patient with Alzheimer's disease?		
Yes	28	62.2%
No	17	37.8%
At work, do you care for a patient with Alzheimer's disease?		
Yes	19	42.2%
No	26	57.8%
Would you know how to conceptualize Alzheimer's disease?		
Yes	34	75.6%
No	11	24.4%
Have you had access to information on Alzheimer's disease during your technical-professional nursing training?		
Yes	30	66.7%
No	15	33.3%

In Table 2 one observes that 25(55.6%) undergraduate students have attended the discipline of Elderly Health Nursing during her/his current undergraduate course, whereas 20(44.4%) haven't attended the discipline, yet.

When asked whether they have already provided nursing care for an AD patient, 28(62.6%) said yes and 17(37.8%) said no. Regarding the fact of having contact with AD patients at work, 19(42.2%) undergraduate students stated to have cared for and 26 (57.8%) stated to have not cared for.

About know how to conceptualize AD, 34(75.6%) students said yes and 11(24.4%) students said they didn't know how to conceptualize it.

Those who said to have had access to information on AD during the Nursing Assistant or Nursing Technician course totaled 30(66.7%) undergraduate students, whereas 15(33.3%) students said they have not had this information.

Table 3 describes the indicators of question 12, which addressed the concept of AD.

Table 3. Indicators with regard to the concept of Alzheimer's disease. Santana de Parnaiba (SP), 2012

Stated to know not the disease	1	2.2%
Stated to know the disease, but defined it incorrectly	18	40.0%
Stated to know the disease and defined it correctly	2	4.4%
Stated to know the disease, but defined it in an incomplete way	18	40.0%
Didn't answer to the question	6	13.3%

Through Table 3, one can observe that only 2(4.4%) undergraduate Nursing students said to know and defined correctly AD, 18(40%) students said to know the disease, but defined it incorrectly, and other 18(40%) students said to know, but reported it incompletely, 6(13.3%) students didn't answer to the question, and 1(2.2%) student reported to know not the disease.

Table 4 presents the indicators of question 13, which addresses the nursing care specific to people with AD.

Table 4. Indicators with regard to the specific nursing care for people with Alzheimer's disease. Santana de Parnaiba (SP), 2012.

Address, in care, only the nursing routines	3	6.7%
Specified correctly the care needed by a person with Alzheimer's disease	5	11.1%
Answered incorrectly to the question, since don't mention nursing care	8	17.8%
Specified incompletely the care for a person with Alzheimer's disease	17	37.8%
Didn't answer to the question	12	26.7%
Total	45	100%

One observes in Table 4 that 3(6.7%) students addressed only nursing routines, only 5(11.1%) students correctly specified the care needed by an AD patient, 17(37.8%) undergraduate students incompletely reported nursing care, and 12(26.7%) students didn't answer to the question.

DISCUSSION

In this research, there was a predominance of female undergraduate students (84.4%), corroborating a study carried out in a Higher Education institution in the countryside of the state of Sao Paulo, where almost all participants were female (89.2%).[16]

Nursing is based on human care, realized as the moral ideal of the profession. Due to its nature, Nursing was constructed as a female attribute, being related to women[16], thus, one expected that in the sample under study a preponderance of women was also found, although there's a constant increase in the interest of men to join this profession.[16-7]

The caring practices have always been associated to females.[17] Resuming history, one finds out, with regard to the social status of women, there's a myth defined by conceptions which refer women to an innate condition attributed to their proximity to nature, like the natural ability of biological reproduction and the responsibilities in home care and family care.

The average age of undergraduate students was 29.7 years, and there's a need for stressing that the research focus relied on the students from a private university with technical-scientific training; a significant number (88.9%) work, all in the Nursing field, thus, they're students and professionals.

Studies show the differences in the profile of students from public and private Nursing schools, in the latter ones, most students work for the maintenance of their own or their family, joining the profession with older ages.[18-9]

The students face the requirements of being a nursing professional, besides the university student's peculiar burden. This whole circumstance has been characterized as a panorama, at least, stressful, with a great physical, mental, and emotional distress.

From this perspective, a study points out that students who are already working, by entering the University, in the case of those who work in the Nursing field, face problems in many different ways, due to the nature of this activity, such as, for instance: long working hours, precarious physical and environmental conditions, and the type of tasks they perform.[19]

The working students have their difficulties potentiated by the double day's work which they face, something which interferes with academic performance. This way, the professor shall use different strategies with this group.[16]

In the same direction, the teaching-learning strategies should be aimed at discussing the situations experienced in daily work by the individuals involved, and the professional being trained and that who is practicing can shape and consolidate competences in a continuous process[20], where one understands education as permanent, constructed throughout life, in relationships at work, social, between people who share living in society.

Supported by Freire[21], one points out that professor and student share the teaching-learning experience, which constitutes a time of intense growth for both of them. There's a clear improvement in the professor-student interactions, based on mutual trust. The pedagogical practice should be focused on dialogue and on a problem-solving educational perspective.[21]

One observes that most undergraduate students who attended the discipline of Nursing in Elderly Health in their current undergraduate course stated they had access to information on AD during the technical-professional training and provided nursing care for AD patients, but, in question 12, only 2(4.4%) respondents correctly defined the disease, and both students haven't attended the specific discipline, which addresses Gerontology, and only one of them cares for AD patients. A total of 18 (40%) respondents incompletely conceptualized AD, and only 2 of these students haven't attended the specific discipline which addresses elderly health.

Worrying facts which need to be thought through and, perhaps, the way how the educational activities are conducted in the discipline of Nursing in Elderly Health, don't

result in a good understanding of the content. In the institution under study, the Political and Pedagogical Project of the undergraduate Nursing course, points out that the educational practices used are still structured under traditional pedagogical models.

The current researches and studies on the construction of knowledge in Higher Education have shown that still persist, in some professors and institutions, that traditional posture of management of the teaching-learning process. The very public policies for education hinder access to constant updating and the improvement of methodologies.[22-3]

It's important to highlight that the undergraduate Nursing course, as well as the other courses in the health field, face a problem: most professional have no pedagogical training. Nurses join the teaching profession in Higher Education as a natural result of their activities and due to various reasons and interests and, in most cases, they never ask themselves about what being a teacher is like. Thus, they work in Higher Education without being prepared for the performance of teaching.

The university professor's role should be rethought through three competences for teaching in Higher Education: the first refers to mastering the basic knowledge from the area to the professional's experience. The second involves mastering the concept of learning process, combining the cognitive, affective, and emotional development, as well as the improvement of skills and the establishment of attitudes, opening spaces for interaction and interdisciplinarity. The third comprises the discussion, with students, of the political and ethical aspects of the profession and its practice in society, so that they can present themselves as citizens and professionals.[22]

By analyzing the indicators on the specific nursing care for people with AD, addressed by question 13, only 11.1% of students correctly specified the needed care, among them, all attended the discipline which covers Gerontology and provided care for elderly people with AD, 37.8% of undergraduate students incompletely reported nursing care, and most of these students attended the discipline which covers Gerontology and provided care for elderly people with AD.

These facts seem to point to a doing without daily exercise, indispensable to the student, professor, and nursing practitioner, who need to discuss, interpret, dialogue, and learn in a creative way.[24] This is a continuous learning process which extends beyond knowledge on the theme itself, provoking new conceptions, attitudes, and possibilities in the recreation of the very way of being and caring for.

The Curriculum Guidelines of the undergraduate Nursing course approved by the Ministry of Education, in November 2001, establish the competences and skills to be developed in the process of nurse's education. They define that the profile of nursing professionals should cover a generalist, critical, and reflective training, thus the professional is trained for practicing nursing care, based on scientific and intellectual rigor and ruled by ethical principles. She/he is able to know and act in the face of the most prevalent problems/situations of health and disease in the national epidemiological profile, with an emphasis on the region where she/he works, identifying the biopsychosocial dimensions of its determining factors.[25]

The implementation of the Curriculum Guidelines of the undergraduate Nursing course represents a key strategy to meet the redirection of nursing professionals' training, and there's a structuring frame which is important in the construction of a new paradigm for nursing education: training guidelines to boost the implementation of principles from the Unified Health System (SUS).[18]

This analysis leads one to rethink the training and think through the way how we can contribute to the consolidation of a pedagogical practice ruled by the principles of autonomy, reflection, interdisciplinarity, and integration in nursing teaching. One can't train generalist, critical, and reflective nurses without professors adequately trained. There's a need for more investment in the training of nursing professor so that the teaching-learning process becomes more effective.[26]

One way to overcome the current situation is establishing permanent training programs, having in mind the action-reflection-action and the possibility of evaluating the collective, the experiential knowledge, the professor's life cycle, and the university as the locus of training.

Although one recognizes the values of the proposal of the Curriculum Guidelines of the undergraduate Nursing course in the training of a nurse who wants to be more critical, reflective, ethical, among other characteristics, it becomes important to realize that it doesn't involve only setting new structuring frames, prioritizing new aims, changing the profile, restructuring contents, restoring operating or scheduling conditions.

There're other attributes developed within the classroom space and during practical classes and internships, such as: professor and students' involvement in the contextual issues, the very professor/student relationship, the education one constructs, the teaching-learning process, and, finally, the issues going beyond the Political Pedagogical Project.

Something which catches the eye, in this research, is the need for rethinking the nurse's training. This refers us to the specificity of Nursing in the interdisciplinary construction, that is, Nursing should assume its core competence and responsibility, care. It's aimed at the patient, including her/his family, and not at the disease, and, to be feasible, it requires the use of knowledge from various disciplines, through a global, critical, ethical, and inclusive training.

One regards as the study's limitations the numerous variables which underlie the analysis of undergraduate students' knowledge, with technical-professional training, on AD, because it's connected to the training of the Nursing professor and the institutional Political Pedagogical Project. The results were collected in a single private university. These drawbacks limit the generalization of findings. However, these limitations don't invalidate the study, the results encourage the continuation of this type of evaluation with a larger group, for a longer time, and with a more detailed measurement of criteria for a possible confirmation of the results described.

CONCLUSION

The research showed that the knowledge of undergraduate nursing students, with technical-professional training in nursing, on AD is insufficient for their practice along with these clients and their relatives. One found out a gap between theory and practice, contents focused on the biomedical model, with verticalized teaching methodology instead of a problem-solving one, thus, fragmented.

Living, today, in the environment called globalized, means being part of a constant emotional and intellectual challenge. The anxiety generated by this challenge, as well as the constant requirements from the society for trained professionals, both with regard to the technical and intellectual aspects, causes a mismatch between the need of the labor market and the formal learning process within the Higher Education institutions.

The contribution of this study was pointing out that there's a need for rethinking the Nursing professors and students' role, the way how they organize themselves to meet the new demands that education poses.

In this mismatch context between the student and the professor, the use of strategies to facilitate teaching emerges an alternative to effective professional preparation, since it's based on the assumption that learning occurs differently when experienced, i.e. learn by living and doing, not only by copying pre-existing ways and models.

REFERENCES

1. Banco Mundial. Population aging: is Latin America ready? Directions in Development. Washington: The World Bank; 2011.

2. Queiroz BL, Turra CM. Window of opportunity: socioeconomic consequences of demographic changes in Brazil. Washington: NTA; 2010.

3. Freitas EV, Ligia Py, Cançado FAX, Doll J, Gorzoni ML. Tratado de geriatria e gerontologia. 3 ed. Rio de Janeiro: Guanabara Koogan; 2011.

4. Herrera JE, Caramelli P, Silveira ASB, Nitrini R. Epidemiologic survey of dementia in a community-dwelling Brazilian population. Alzheimer Dis Assoc Disord. 2002;16:103-8.

5. Aprahamian I, Martinelli JE, Yassuda MS. Doença de Alzheimer: revisão da epidemiologia e diagnóstico. Rev Soc Bras Clín Méd [Internet]. 2009 [cited 2012 May 23];7:27-35. Available from: http://files.bvs.br/upload/S/1679-1010/2009/v7n1/a27-35.pdf.

6. Silva P, Terra F, Coelho J, Reis T, Martins V. Main difficulties found by caregivers of patients with Alzheimer's disease. J Nurs UFPE on line [Internet]. 2012 Mar [cited 2012 May 23];6(5):1086-93. Available from: http://www.ufpe.br/revistaenfermagem/index.php/revista/article/view/2443.

7. Sperling R, Salloway S, Brooks DJ, Tampieri D, Barakos J, Fox NC, et al. Amyloid-related imaging abnormalities in patients with Alzheimer's disease treated with bapineuzumab: a retrospective analysis. Lancet Neurol. 2012 Mar;11(3):241–9.

8. Schulz R, Zdaniuk B, Belle SH, Czaja SJ, Michael Arrighi H, Zbrozek AS. Baseline differences and trajectories of change for deceased, placed, and community residing Alzheimer disease patients. Alzheimer Dis Assoc Disord. 2010 Apr-June;24(2):143-50.

9. Schubert CC, Boustani M, Callahan CM, Perkins AJ, Hui S, Hendrie HC. Acute care utilization by dementia caregivers within

urban primary care practices. J Gen Intern Med. 2008 Nov;23(11):1736–40.

10. Gaioli CCLO, Furegato ARF, Santos JLF. Perfil de cuidadores de idosos com doença de Alzheimer associado à resiliência. Texto & Contexto Enferm. 2012 Mar;21(1):150-7.

11. Ricci M, Guidoni SV, Sepe-Monti M, Bomboi G, Antonini G, Blundo C. Clinical findings, functional abilities and caregiver distress in the early stage of dementia with Lewy bodies (DLB) and Alzheimer's disease (AD). Arch Gerontol Geriatr. 2009 Sep-Oct;49(2):101-4.

12. Alzheimer's Disease International. World Alzheimer report 2011 [Internet]. 2010 [cited 2012 Mar 20]. Available from: http://www.alz.org/documents/national/World_Alzheimer_Report_2010.pdf.

13. Santana RF, Almeida KS, Savoldi NAM. Indicativos de aplicabilidade das orientações de enfermagem no cotidiano de cuidadores de portadores de Alzheimer. Rev Esc Enferm USP. 2009;43(2):459-64.

14. Aguiar VS, Meneses RMV. Implications of Alzheimer's disease caregiver's life: literature review. J Nurs UFPE on line [Internet]. 2012 Apr [cited 2012 May 22];6(4):884-8. Available from: http://www.ufpe.br/revistaenfermagem/index.php/revista/article/view/2238/pdf_1118.

15. Gatti BA. Quantitative studies in education. Educação e Pesquisa [Internet]. 2004 Jan-Feb [cited 2012 May 20];30(1):11-30. Available from: http://www.scielo.br/pdf/ep/v30n1/a02v30n1.pdf.

16. Wetterich NC, Melo MRAC. Perfil sociodemográfico do aluno do curso de graduação em enfermagem. Rev Latino-Am Enferm [Internet]. 2007 May-June [cited 2012 May 26];15(3):404-10. Available from: http://www.scielo.br/pdf/rlae/v15n3/pt_v15n3a07.pdf.

17. Coelho EAC. Gênero, saúde e enfermagem. Rev Bras Enferm [Internet]. 2005 May-June [cited 2012 May 23];58(3):345-8. Available from: http://www.scielo.br/pdf/reben/v58n3/a18v58n3.pdf.

18. Alves EF. Características demográficas e ocupacionais do estudante-trabalhador de enfermagem e o risco de acidentes de trabalho. Trabalho e Educação [Internet]. 2011 Sep-Dec;20(3):47-59. Available from: http://www.portal.fae.ufmg.br/seer/index.php/trabedu/article/viewFile/688/777.

19. Kawakame PMG, Miyadahira AMK. Qualidade de vida de estudantes de graduação em enfermagem. Rev Esc Enferm USP [Internet]. 2005 June [cited 2012 May 20];39(2):164-72. Available from: http://www.scielo.br/pdf/reeusp/v39n2/06.pdf.

20. Oliveira PP, Cisotto L. Qualidade da educação segundo Henry Giroux. In: Coimbra CL, Possani LFP, Stano RCMT, Gonçalves YP, Abramowicz M, coordenadores. Qualidade em educação. Curitiba: CRV; 2011. p. 32-40.

21. Freire, P. Pedagogia do oprimido. 44. ed. São Paulo: Paz e Terra; 2005.

22. Masetto MT. Discutindo o processo ensino/aprendizagem no ensino superior. In: Marcondes E, Gonçalves EL, coordenadores. Educação médica. São Paulo: Sarvier; 2008.

23. Esperidião E, Munari DB, Stacciarini JRM. Desenvolvendo pessoas: estratégias didáticas facilitadoras para o autoconhecimento na formacão do enfermeiro. Rev Latino-Am Enferm [Internet] 2002 July-Aug [cited 2012 May 21];10(4):516-22. Available from: http://www.scielo.br/pdf/rlae/v10n4/13363.pdf.

24. Guariente MHM, Zago MF, Soubhia Z, Haddad MCL. Sentidos da pesquisa na prática profissional de enfermeiras assistenciais. Rev Bras Enferm [Internet]. 2010 July-Aug [cited 2012 May 21];2010 July-Aug;63(4):541-7. Available from: http://www.scielo.br/pdf/reben/v63n4/07.pdf.

25. Conselho Nacional de Educação. Resolução CNE/CES n. 3, de 7 de novembro de 2001. Institui as Diretrizes Curriculares Nacionais do Curso de Graduação em Enfermagem [Internet]. 2001 [cited 2012 Dec 23]. Available from: http://www.portalcofen.gov.br/sitenovo/sites/default/files/resolucao_CNE_CES_3_2001Diretrizes_Nacionais_Curso_Graduacao_Enfermagem.pdf.

26. Ito EE, Peres AM, Takahashi RT, Leite MMJ. O ensino de enfermagem e as diretrizes curriculares nacionais: utopia x realidade. Rev Esc Enferm USP [Internet]. 2006 Dec [cited 2012 May 23];40(4):570-5. Available from: http://www.scielo.br/pdf/reeusp/v40n4/v40n4a16.pdf.

Submission: 2012/11/20
Accepted: 2013/12/26
Publishing: 2013/02/01

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