

# Andragogy in nursing: a literature review

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## Andragogy in nursing: a literature review

### Abstract

**Objective.** To describe the use of the term andragogy in the contents of nursing publications. **Methodology.** Bibliographic study. A search was undertaken in the databases MEDLINE, LILACS, BDNF, EMBASE and ERIC, for articles published between 1999 and 2011 which included the term 'andragogy' or derived terms in the English language. **Results.** 51 publications were found. The study's main categories were: ideological and theoretical bases (71%), historical antecedents (37%), andragogy's operationalization (43%) and application in Nursing (86%). The most-frequently treated issue was continuing education (45%). Most articles were published in the United States (41%). In Brazil, the use of andragogy is more recent than in other countries. The studies indicate that andragogy has a positive influence in the students' work lives. **Conclusion.** Although the use of andragogy in nursing education is less frequent, its use in nurse training shows it to be important for future professional performance.

**Key words:** nursing; models, educational; learning; teaching; education, nursing.

## Andragogía en la enfermería: una revisión de la literatura

### Resumen

**Objetivo.** Describir el empleo del término andragogía en el contenido de las publicaciones en enfermería. **Metodología.** Estudio bibliográfico. Se hizo búsqueda en las bases de datos MEDLINE, LILACS, BDNF, EMBASE y ERIC de artículos publicados entre 1999 y 2011 que incluyeran el término "andragogía" o de alguno de sus derivados en el idioma inglés. **Resultados.** Se encontraron 51 publicaciones. Las principales categorías de estudio fueron: bases ideológicas y teóricas (71%), antecedentes históricos (37%), operacionalización de la andragogía (43%) y aplicación en Enfermería (86%). La educación permanente fue el tema tratado más frecuentemente (45%). Los Estados Unidos publicaron la mayor parte de los artículos (41%). En Brasil, el

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**Subventions:** None.

**Conflicts of interest:** none.

**Receipt date:** January 24<sup>th</sup> 2012.

**Approval date:** September 19<sup>th</sup> 2012.

**How to cite this article:** Draganov PB, Andrade AC, Neves VR, Sanna MC. Andragogy in nursing: a literature review. Invest Educ Enferm. 2013;31(1): 86-94.

uso de la andragogía es más reciente que en otros países. Los estudios indicaron que la andragogía tuvo una influencia positiva en la vida laboral de los alumnos. **Conclusión.** Aunque el empleo de la andragogía en la educación en Enfermería es poco frecuente, su uso en la formación de enfermeros muestra que es importante para el futuro desempeño profesional.

**Palabras clave:** enfermería; modelos educacionales; aprendizaje; enseñanza; educación en enfermería.

## Andragogia e seu uso na enfermagem: uma revisão da literatura

### ■ Resumo ■

**Objetivo.** Descrever o emprego do termo andragogía no conteúdo das publicações em enfermagem. **Metodologia.** Estudo bibliográfico. Fez-se busca nas bases de dados MEDLINE, LILACS, BDNF, EMBASE E ERIC de artigos publicados de 1999 a 2011 que incluíssem o termo “andragogía” ou de algum de seus derivados no idioma inglês. **Resultados.** Encontraram-se 51 publicações. as principais categorias de estudo foram: bases ideológicas e teóricas (71%), antecedentes históricos (37%), operacionalização da andragogía (43%) e aplicação em enfermagem (86%). o tema mais frequentemente tratado foi a educação permanente (45%). Os Estados Unidos publicaram a maior parte dos artigos (41%). No Brasil, o uso da andragogía é mais recente do que em outros países. Os estudos indicaram que a andragogía teve uma influência positiva na vida trabalhista dos alunos. **Conclusão.** Ainda que o emprego da andragogía na educação em enfermagem é pouco frequente, seu emprego na formação de enfermeiros mostra que é importante para o futuro desempenho profissional.

**Palavras chave:** enfermagem; modelos educacionais; aprendizagem; ensino; educação em enfermagem.

## Introduction

Andragogy is the art and science of leading adults to the learning. This theory is structured based on adults' characteristics which favor learning.<sup>1</sup> Although the concept was formulated at the end of the nineteenth century, andragogy gained supporters and aroused academics' interest in the second half of the twentieth century, thus reaching those interested in the teaching of nursing.<sup>2</sup> During a nurse's training and professional career, innumerable competencies must be developed to meet the needs of the market and life in society. A constant search for information and learning is fundamental for this, and must be facilitated through teaching processes which are appropriate to these professionals' characteristics.<sup>3</sup>

In Brazil, the origin and concentration of studies on andragogy in Nursing and Medicine are related to the UNI Project - “A New Initiative in

*Training Health Professionals: Union with the Community*” (UNI comes from the first letters of the first three words here – Uma Nova Iniciativa), which, from the 1990's on, encouraged the exchanging of teaching methodologies between Latin American countries. This project was an initiative from the W.K. Kellogg Foundation, which set up the implantation of innovative pedagogic practice in the training of health professionals, by the university, with the changing of health care practice in the ambit of Local Health Services (SILOS) and encouraged a new type of social participation, with a view to promoting health and improving quality of life.<sup>4</sup>

It is important to note that andragogy brings together a set of principles which, if used appropriately, contribute to the learning's success and, consequently, promote improvement in

Professional Training, Continuing Education, and Health Education. Thus it becomes important to be familiar with the studies about the application of andragogy in Nursing, to ascertain its impact on this area and inform further research on its implementation in different teaching-learning scenarios. For this reason, the present study aims to investigate the content of the publications on the use of andragogy in Nursing and the context in which they occur, that is, 1) to characterize the studies by place of origin of publication, vehicle and year and 2) systematically to analyze and describe the publications' contents on andragogy and Nursing.

## Methodology

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A bibliographic review study, whose data collection was carried out in June 2011, in the databases: MEDLINE (National Library of Medicine), LILACS (Latin-American and Caribbean Health Science Literature), BDENF (Nursing Databases), EMBASE (Excerpta Medica Database) and ERIC (Education Resources Information Center – a Humanities database, CSA Illumina), by means of the virtual libraries: VHL (World Health Organization (W.H.O) Virtual Health Library), PUBMED (United States National Library of Medicine), SIBi USP (University of São Paulo Integrated Library System) and SCIELO (Scientific Electronic Library Online). The descriptor “Andragogia” was used for this, along with its derivations in English: “andragogy” or “andragogical” or “andragogic” and “adult learning theory”, the name of the theory studied. The criteria for the choice of the databases cited was the fact that these assemble the largest number of publications on Health, with the exception of the ERIC database, which brings together publications in the area of Education.

The search period was defined as January 1999 to June 2011, the initial data being selected based on the study which presents a panorama of adult education - *Norman GR: The adult learner: a mythical species. Acad Med 1999; 74:886-889*. As a product of the search made, 103

studies were located. The data from these works was entered in an Excel® spreadsheet, based on which, through the elimination of repetitions of indications and the identification - in the texts of the abstracts – of those which had no relation to the object of the study, it was possible to select 53 Nursing studies. Two articles not being found, printed copies of 51 studies obtained were read and a thematic annotation was produced for each. The authors therefore proceeded to the calculation of the simple and relative frequency of the data entered in the spreadsheet and to the grouping of the annotation's products by similarity and thematic relevance, from which the following thematic categories emerged: “Ideological and theoretical bases of andragogy”, “Historical antecedents of andragogy”, “Operationalization of andragogy” and “Application of andragogy in Nursing”.

## Results

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On analyzing the number of publications, it was identified that there was a greater concentration of articles over the preceding five years. This demonstrated a gradual increase in interest in studying andragogy in Nursing. The highest number of publications was found in the periodicals *Nurse Education Today*, with eight (15.7%) publications, and seven (13.7%) in *Nurse Education in Practice*. These periodicals exclusively publish texts on nursing education, so it was anticipated that the concentration of publications observed would occur in these. It may be verified that most of the studies originated in the USA, with 22 (43.1%) occurrences, followed by the United Kingdom with 15 (29.4%) research projects. Three (5.9%) publications occurred in Brazil. As the most popular author to have studied andragogy is North American, it was expected that most of the studies would be found in that country. The number of studies in Brazil is far below that of countries such as the USA and United Kingdom which, with their tradition of research in the teaching of nursing, together produced a total of 37 (72.6%) publications.

In relation to the publications' distribution by thematic area, it was possible to identify that andragogy in continuing education occurred in 23 (45.1%) publications, in professional training in 21 (41.2%) studies, that six (11.8%) publications were dedicated to its application in health education and one (2.0%) was a bibliometric study and was not applicable to the areas cited above. The analysis of these data confirmed the observation that andragogy is applied with adult students<sup>5</sup>, as most of the publications were found in continuing education and the training of nurses. The studies were classified according to the content into the four categories previously mentioned, and which will be presented below.

### **Andragogy's ideological and theoretical bases**

In this category, concepts and definitions on the term, considerations about the authorship of the andragogic model and premises for the use of andragogy are identified. The term andragogy and its derivations were cited in 36 (70.6%) pieces of research, demonstrating that it was a recognized concept. Some publications omitted the term andragogy, using in its place terms such as theory, model, principles of education or learning in adults. The majority of the studies - 43 (84.3%), cited Malcolm Shepherd Knowles as an important reference author on andragogy. A part of the publications - 25 (52.1%) – used terms such as principles, theory, or model for adult learning as synonyms, to briefly define the meaning of andragogy. The publications presented different definitions for andragogy; most frequently, in six (11.8%), it was defined as the science or art of educating adults or helping adults to learn.<sup>2,6-10</sup> Other publications brought variations of this concept and described andragogy as education which stimulates the learner to adapt to change, create new knowledge and continuously improve his or her performance.<sup>11</sup> Definitions were also found on the role of the teacher as facilitator of adults' learning and his/her capacity for creative, innovative work influencing the significant learning.<sup>12</sup> Andragogy was also defined as an old practice of integral training, from the individual and social perspectives, based in self-knowledge.<sup>13</sup>

Some research<sup>2,3,6,8,14-16</sup> cited the learning differences between adults and children, and discussed the teaching-learning theories aimed at these populations, and the assumptions or characteristics of the adults which facilitate learning. Of the assumptions favoring learning, the most frequently occurring were: self-direction, with 36 (70.6%) citations, previous experience, with 26 (51.0%) occurrences, the immediate use of what was learnt for resolving problems, and motivation, both of which had 22 (43.1%) occurrences.

Self-direction was related to the adult's responsibility for his or her development, self-concept and autonomy<sup>2,6,8,9,12-19,21-32</sup> and reflected the maturity and independence which the adult acquired and which made him or her capable of learning more and better.<sup>33</sup> Previous experience was cited by one of the authors<sup>34</sup> as being sometimes disadvantageous, when the student believed that he or she knew enough, due to experience in the area. For other authors,<sup>6,15,17</sup> the use of previous experience allowed one to share, reflect and criticize, thus creating significant and long-lasting learning. In addition to this, individual experience determined the rhythm and trajectory of the learning, being influenced by socio-political-cultural relationships.<sup>6,13,27</sup>

The immediate application of what was learnt and the resolution of problems in daily life were also highlighted in the publications studied. Thus, the adult student noticed that acquisition of the knowledge positively affected his or her reality<sup>12,18,20,30-33,35-38</sup> and this motivated him or her to learn more and more. One of the studies emphasized that the adult needed to understand that he or she could use the knowledge in a real environment and change it for the better.<sup>34</sup> Others discussed about significant learning being directly related to the immediate application of what was learnt.<sup>8,12,21,31-33,37-39</sup> Motivation was also an assumption widely occurring in the publications<sup>6,17,27</sup> and was related to self-esteem and to the self-concept which the adult had as a result of the extension of his or her learning and mastery of new tasks. The readiness to learn arose from the perception of how much the new

content could improve the learner's life.<sup>27</sup> In one piece of research<sup>10</sup> the term Heutagogy, derived from andragogy, was cited as a modern concept of adult education, focusing on the student's self-direction as a key factor for the success of the learning of nurses' clinical competencies.

### **Historical antecedents of andragogy**

This category was constructed based on the identification of social, cultural, financial, political and ideological characteristics which influenced the history of andragogy in Nursing, presented by the authors studied in 19 (37.3%) publications which addressed and discussed historical antecedents of andragogy in Nursing. A large part of the works - 22 (43.1%) – were from the USA and of these, seven (13.7%) related the use of andragogy to the scarcity of nurses and disinterest in Nursing in that country. This fact created a search for incentives for the training of nurses – among which were the changing of teaching models and methodologies. Andragogy was introduced in 1970,<sup>8,14,17,18,27,35,40,41</sup> with the aim of attracting students and keeping them on the course, and was based on the condition of the student being an adult and having heterogeneous population characteristics. Since 1950, the USA had suffered a scarcity and a lack of interest in the area,<sup>41</sup> one of the most affected areas being the specialty of Operating Room Nursing, due to being a service with greater responsibility and risk of errors.<sup>8</sup> One of the alternatives found for minimizing this shortage of manpower was the creation of accelerated programs for training nurses, lasting 18 months, based in andragogy, and aimed at mature students already trained in other professions.<sup>35,41</sup> These courses, despite suffering a lack of skill in the managing of andragogy by the teaching staff,<sup>18</sup> were shown to be a good alternative for attracting and training nurses.

15 (29.4%) publications on andragogy in Nursing were produced in the United Kingdom, and were related to Project 2000, a program for training nurses at university level, with the necessity for a diploma to exercise the profession as a result of European unification. The teaching's emphasis on

clinical skills, health education and prevention of disease in the community stimulated the use of andragogy.<sup>40,42</sup> This would boost the profession in this area in these countries. In a study undertaken in Latin-American countries, the use of andragogy was related to Project UNI, which stimulated the exchanging of teaching methodologies and incentivized this theory's use in those countries to incentivize self-direction<sup>2,42</sup>. One of the studies<sup>24</sup> brought a historical, clarifying and provocative contribution, affirming that the power mediated by the teacher limited or even annulled the student's freedom of expression, and that this barrier certainly influenced the subservient attitude which is so common in Nursing. It was concluded that alternative ways of teaching which make the student more independent may contribute to more pro-active positions.

### **Operationalization of andragogy**

This category was constructed based on the characteristics of the practice of andragogy in Nursing, with emphasis on the environment, the decision-making process, the characteristics of the andragogic teacher and the methodologies tested. The learning environment must be considered from the physical, psychological and social standpoints,<sup>1</sup> and its preparation was relevant in these studies. Thus, to favor learning, the environment should be pleasant and promote confidence<sup>6</sup> and also be culturally and mutually respectful, informal, negotiable, and cooperative.<sup>7,19,21,38,43,44</sup> In addition to this, it was necessary for the environment to stimulate reflection and provide real learning situations.<sup>17,37</sup> The teacher, in this context, should develop skills to manage the environment positively, creating empathetic relationships which increase his or her students' chances of success.<sup>6,18,39</sup>

For andragogic theory, learning follows a processual model mediated by the facilitator. This process involves eight stages of stimulating and supporting the student: preparing the student for self-direction, establishing a climate of learning, creating mechanisms for joint planning, knowing and satisfying the learning needs, formulating learning objectives, designing and conducting

learning experiences, evaluating and stimulating self-evaluation.<sup>6,14,18,23,38,42</sup> In this process, the research positioned the teacher as fundamental to stimulating and supporting the student's individual maturing and growth<sup>15,25,46</sup> and also to gradually transferring the direction of the learning, so that the student should adapt to this new situation and construct new competencies.<sup>6,7,15,39,43,45</sup> Of the methodologies inserted in the context of andragogy and Nursing which facilitate the change of focus to the student, the most-cited were Problem-Based Learning (PBL) and the learning contracts, which stimulated the student's skill in adapting to changes and approximating theory to practice.<sup>7-9,24,25,28,36,39,47</sup>

### **Application of Andragogy in Nursing**

In this category, the authors discuss the use of andragogy in Continuing Education, in Professional Training and in Health Education. The majority of the publications - 44 (86.3%) - were aimed at Professional Training and at Continuing Education, developing arguments about the methodology's application, its advantages and its disadvantages. In the case of Continuing Education, addressed in 23 (45.1%) studies, the strategies were directed at practical exercises for sharing experiences, and at activities in real or virtual environments, in which the results demonstrated effectiveness in the application of andragogy. Self-direction favored an increase in significant knowledge, personal growth an increase in professional prestige, facilitated personal relationships, and stimulated the improvement of motor skills, the reduction of conflicts and an increase in self-confidence. These gains created positive contributions to the care given.<sup>13,48</sup> Various factors based in andragogy contributed to the success of the learning, these being motivation, previous experience as a learning resource, and the stimulus for reflection through self-evaluation.<sup>8</sup>

Of the strategies, methods and programs, it was the workshops, the forums, the simulations and the preparatory modules for self-direction, which demonstrated evidence of success. The mentoring program, the use of PBL and Distance Learning (DL) also stood out. In relation to DL, which is very

common in Continuing Education, the sharing of experiences made it possible to learn concepts and stimulate reflection. The use of a bi-modal format (DL and learning where the student was physically present) for the development of teaching staff in the areas of strategies and effective methods for learning-teaching and self-evaluation was shown to be effective and, consequently, to improve practice.<sup>18</sup> Practical placements, knowledge and skills with the assumptions of adults' learning were used for the development of tutors. The program for the improvement of tutors encouraged updating and the development of competencies to incentivize the process of reflection on competent and safe practice.<sup>36,49</sup>

In relation to andragogy in Professional Training, there were 21 (41.2%) works, whose authors reported the use of learning resources, along with their advantages and disadvantages. Collaborative learning, based in andragogy, applied to training through the use of previous experiences, repetitions with cognitive and psychomotor reinforcement and experiments in a real environment, was effective for learning.<sup>32</sup> As strategies, PBL stood out for encouraging self-direction and the student's initiative for diagnosing needs, formulating goals, raising resources and self-evaluating. The use of PBL, associated with the model of multiple intelligences, produced excellent results for learning, as it challenged the student to resolve problems.<sup>47</sup> In addition to this, the use of concept maps was cited as an ideal tool for learning concepts and self-evaluation, as it allowed the measuring of the student's growth, the incentivizing of self-direction and the construction of new competencies.<sup>43</sup>

DL and the instrument of the forum favored the exchanging of experiences and encouraged the raising of the students' needs during training,<sup>45</sup> although these should be used with caution, so as not to restrict critical thinking.<sup>19</sup> In their turn, the bimodal course formats allowed self-direction, favoring moments of reflection, criticism and the deconstruction and construction of new paradigms.<sup>20</sup> Remaining in this area, international exchanges – via the Internet – made the students more culturally competent, principally through

the opportunity to exchange experiences.<sup>50</sup> The learning contracts encouraged the students to become more self-confident in proposing objectives and develop skills. This strategy made them more motivated, flexible and secure, as well as promoting structured, individual learning and an atmosphere of mutual respect.<sup>25</sup> For the teachers, it favored the use of academic competencies, brought them closer to the students, and encouraged the development of new skills.<sup>20</sup> Other strategies were also cited, such as the use of the portfolio, which allowed self-evaluation and the evaluation of the student's progression by the teacher<sup>16</sup>. The patient as mediator of the learning was also cited as a resource for the acquisition of competencies.<sup>26</sup>

Among the limits of andragogy in Professional Training, it was ascertained that the use of self-learning with undergraduate students, in the course's initial stages, was shown to be little effective, as the student wanted the teacher to take the lead, out of habit from traditional teaching. The resistance of the teaching body to changes in teaching was also observed, as was the compatibility of the use of andragogy only with small groups of students.<sup>5,23,25</sup> The use of modules in the initial stages of the course to prepare the student for self-direction was suggested, so as to combat this limitation.<sup>1</sup> Of the six (11.8%) studies aimed at Health Education, it can be seen that andragogy influenced the impact of the educative processes through evidence, with the use of educational pamphlets and the sharing of experiences. Health Education activities were aimed at the cognitive area and were intended to facilitate the adaptation to stressful events, helping the individual to understand, foresee and deal with the illness, and improve self-care.<sup>39,46,51</sup> The use of DL in Health Education was also cited as a learning strategy.<sup>28</sup>

## Discussion

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Scientific production on the use of andragogy began in the USA in 1970, and was driven by

andragogy's use in programs aimed at combatting the shortage of nurses and lack of interest in the profession. With time it spread to other countries, and over the last five years there has been a steady increase in studies, evidencing the importance which Nursing is giving this issue. The USA produced a large part of the publications, doubtless because this theory was explored deeply in that country by Malcolm Shepherd Knowles. Another important number of studies was produced in Europe, driven by Project 2000. In Brazil, the use of andragogy was more recent, and was associated with the UNI Project.

In the studies analyzed, the most frequently addressed issue was Continuing Education, probably because this brings together adult, mature individuals. This was followed by Professional Training and Health Education – this last with few publications. Of the categories in the present study, the Ideological and Theoretical Bases brought together the most productions on the issue. Most of the articles dealt with the advantages of using andragogy in motivating the student who, on accepting responsibility for his or her development, collected competencies, positively influencing his or her work and life. The limits of andragogy's use were also cited, not because they were many, but because they define the success or failure of the learning if they are not taken into account.

The present study meets the need to provide a more up-to-date literature review of this issue, as the last<sup>9</sup> dates from 1999 and since then various other research has been produced on andragogy in Nursing. The present initiative aimed to contribute to further research on this issue, by systematizing the available knowledge on the matter, describing its concept, applicability, advantages, disadvantages, the limits on its use, its possibilities, and the methodologies applied in Nursing Education and in Health, which may also contribute in changing professional practice, both among those teaching nursing and those practicing.

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