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ACADEMIC AND PROFESSIONAL DEVELOPMENT OF GRADUATES FROM HEALTH MASTER PROGRAMS: INTEGRATIVE LITERATURE REVIEW

^{1,*}Elisabete A. Andrade, ²Maria Dyrce D. Meira, ³Gina A. Abdala, ⁴Jessyka N. Araújo and ⁵Natália C. Oliveira

¹Professor and Researcher of the Master Program in Health Promotion and Psychology Under Graduation at the Adventist University of São Paulo (UNASP), Brazil

²Professor and Researcher of the Master Program in Health Promotion at the Adventist University of São Paulo (UNASP), Brazil

³Professor and Researcher of the Master Program in Health Promotion and Nursing Under Graduation at the Adventist University of São Paulo (UNASP), Brazil.

⁴Psychology Under graduation Student at the Adventist University of São Paulo (UNASP), Brazil

⁵Professor and Researcher of the Master Program in Health Promotion and under Graduation in Physical Education, Nutrition and Physical Therapy at the Adventist University of São Paulo (UNASP), Brazil

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ABSTRACT

Graduates of health master programs find, in their daily work, situations that confront the competences developed during the course with those required in professional practice. The evaluation of these students can contribute to the adequacy of the programs' pedagogical structure, besides pointing out the aspects that have positively or negatively impacted their academic and professional education. The aim of this study was to analyze the influence of master programs in health over the academic and professional development of graduates. We searched SciELO, LILACS and PubMed databases, with the descriptors "master" AND "evaluation" AND "graduate students", in Portuguese, English and Spanish. The search resulted in 22 publications, and after applying the exclusion criteria, 14 articles were included in this review. The impact of the programs was evaluated predominantly by means of questionnaires applied to graduates, with quantitative methods of data analysis. In general, programs have produced relevant learning for the formation of human resources, especially regarding the construction of innovative health practices, scientific foundation, qualification, professional insertion and student empowerment. In conclusion, literature suggests that, although there are challenges to be faced, master programs in the health area contribute positively to the academic and professional success of graduates.

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INTRODUCTION

The beginning of the postgraduate programs in Brazil dates back to the 1930s, when the proposal of the Statute of Brazilian Universities came up with the idea of implanting graduation in the European model (Santos, 2003).

***Corresponding author: Elisabete A. Andrade,**
Professor and Researcher of the Master Program in Health Promotion and Psychology Under Graduation at the Adventist University of São Paulo (UNASP), Brazil.

However, it was only in the 1960s that in fact there was a great initiative in this direction, following the North American model. The Protocol 977 of 1965 established *Stricto sensu* postgraduate programs at master and doctoral levels, involving classes and the production of a dissertation or thesis (Cury, 2005). In addition to the academic master programs, more recently, the Coordination of Improvement of Higher Education Personnel (CAPES) instituted professional master's degree programs. This *stricto sensu* graduation modality has as main purpose the qualification of professionals to meet labor

market's current demands. Its regulation in December of 2009 aimed at strengthening relations between universities and the productive sector through the training of researchers and professionals in the use of scientific knowledge for the productive process of goods and services (Brazil, 2009). One of the major challenges for universities in the management of master programs is to organize a pedagogical project that has as a foundation the construction of a body of knowledge that is not a mere instrument of competitiveness. In order to promote professional qualification, teaching and evaluation strategies should cover the training process and the product derived from it, in this case graduates, who in their trajectory can demonstrate the influence and the scope of the program in their professional follow-up (Zainko, 2008).

From this perspective, it becomes necessary that the university, as an institution with the purpose of proving social contribution and scientific formation, constructs bridges with the reality in which its graduates are inserted. Therefore, the collection of information about this reality can contribute to the improvement in the training process and to the enhancement of the personal and professional competences of those who have sought this academic enrichment (Branquinho, 2012). However, evaluation of the impact of graduate programs still poses a challenge for educational institutions and for regulatory agencies (Moreira and Velho, 2012). It is evident that the commitment and responsibility of educational programs towards the training of professionals who can act not only in their area, but also in a less restricted way in the transformation process of society is evident. When facing complex situations in their daily work, the egresses can confront the skills developed during the course with those required in the professional practice. Therefore, it is believed that he/she can evaluate the formative process with greater ownership and significantly contribute to the adequacy of the pedagogical structure of the undergone program, pointing out the intervening aspects that have a positive or negative impact on his/her academic development (Meira and Kurcgant, 2008). Acknowledging how health professionals develop in the social and work context is an important parameter for educational institutions committed to training that, in addition to meeting the demands of the labor market and responding to health demands, can contribute to the transformation of society (Puschel, Inácio and Pucci, 2009). In addition, signaling the strengths and weaknesses of the programs allows the restructuring of the training processes, going beyond the mere accompaniment of the graduates (Hortale *et al.*, 2014). Thus, the aim of this study was to analyze in current scientific literature the influence of master programs in health area over the academic and professional development of graduates.

METHODS

It is an integrative literature review in which a search was performed in the SciELO, LILACS and PubMed databases, between February 13rd and March 6th, 2017. The following descriptors were used: "master" AND "evaluation" AND "graduate students", in Portuguese, English and Spanish. Articles in languages other than these, those whose complete texts were unavailable, and those published more than ten years ago, were excluded. The search resulted in 22 publications. All of them underwent abstract analysis and eight were consensually discarded by the authors, seven for not contemplate the subject of this review, and one for being a dissertation (Figure 1).

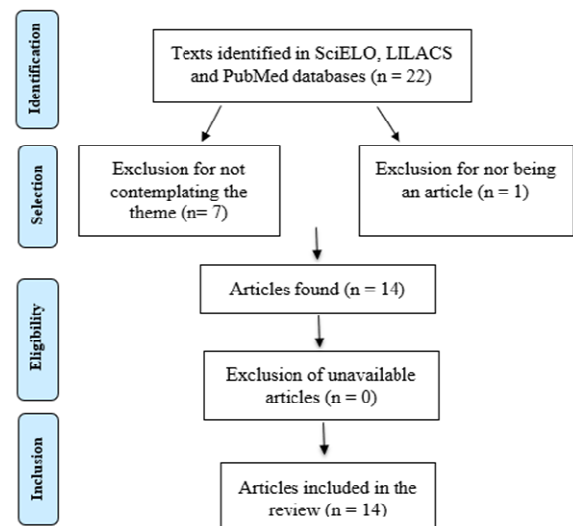


Figure 1. Flowchart of the search performed

RESULTS AND DISCUSSION

The present review was based on the fourteen articles resulting from the search after applying the exclusion criteria. Nine of them were indexed in the SciELO database, three in LILACS and two in PubMed. Table 1 summarizes the main findings of each of them. Seven of the fourteen articles evaluated the impact of educational programs by means of questionnaires applied to graduates (Pires, 2009; Gomes, Goldenberg, 2010; Hortale *et al.*, 2010; Estevam and Guimarães, 2011; Hortale *et al.*, 2014; Souza *et al.*, 2014). In addition, four other studies have used the analysis of course completion papers, student data or program documents (Barros *et al.*, 2008; Gutierrez and Morales, 2011; Torres, Toste and Pérez, 2013; Munari *et al.*, 2014). A smaller number of studies employed both methods (Díaz Rojas *et al.*, 2014; Díaz Rojas *et al.*, 2015; Díaz Campos, Llanes and Farinas, 2016).

Two studies included diverse sources of information in addition to the reports or documents of the graduates. Hortale *et al.* (2010) also heard the leaders of the alumni, and Díaz Campos, Llanes and Fariñas (2016) gathered opinions from teachers and current students of the program. As for the method of analysis employed by these studies, the quantitative analysis of the data was predominant (Barros *et al.*, 2008; Gomes and Goldenberg, 2010; Hortale *et al.*, 2010; Estevam and Guimarães, 2011; Gutiérrez and Morales, 2011; Torres, Toste and Pérez, 2013; Hortale *et al.*, 2014; Munari *et al.*, 2014; Souza *et al.*, 2014; Díaz Rojas *et al.*, 2014), although some studies have used quali-quantitative method (Pires, 2009; Díaz Rojas *et al.*, 2015; Díaz Campos, Llanes and Fariñas, 2016) or the qualitative one (Ramos *et al.*, 2010). Only two studies included master and doctoral students (Gomes and Goldenberg, 2010; Hortale *et al.*, 2014), the others dealt with data from master's degree programs only. Regarding the academic development of the graduates, studies pointed as positive aspects: the discussions in the classroom and seminars (Barros *et al.*, 2008); the opportunities for new learnings and the exercise of creativity (Hortale *et al.*, 2014); preparation for teaching work (Díaz Rojas *et al.*, 2014); the possibility of increasing the quality and relevance of the publications (Barros *et al.*, 2008) and the development of the capacity for critical analysis of the scientific literature (Díaz Campos, Llanes and Fariñas, 2016).

Table 1. Description of the studies resulting from the search

Reference	Objective	Sample	Method	Main Results
Barros et al., 2008	To evaluate the pedagogical proposal "research consortium" introduced in the academic Master program in Epidemiology of the Federal University of Pelotas and the changes that have occurred since its implementation in 1999	Data from the eight classes of the academic Master in Epidemiology (1991-1997) and post-consortium (1991-2005)	A quantitative cross-sectional study comparing the students' titration time, number and percentage of the students' publications, number of students and graduates per classroom	The freedom to choose the topics of study was preserved, even with a field work being carried out. Positive changes: discussions in the classroom and seminars by teachers and students. There was a significant difference in relation to the titration time and the reduction of the psychological suffering of the students to carry out collective activities. There was an increase in quality and relevance of publications. Limitation: impossibility to conduct in-depth studies on specific topics
Pires, 2009	To analyze and explain contradictions, harmonies, correspondences and differences between the initial training of the researcher, carried out by the PIBIC / CNPq program of the State University of Bahia and the professional practice of the graduates of the program	All 127 graduates since the first graduating class of PIBIC / CNPq of the State University of Bahia (1997-2007)	Quali-quantitative cross-sectional study with application of electronic questionnaire and subsequent semi-structured interview	Most graduates of higher education teaching were not supported to be research professors; there was a contradiction between the requirement of productivity and the conditions for doing so. Contradictions have also been raised between resources and attitude in the operation of the program. Some changes have been identified as fruits of advances in the thinking of the organizers, but must still be rethought as reflections of this were observed in the daily life experienced by the alumni after the program
Gomes; Goldenberg, 2010	To analyze the profile of graduates of programs in public health, 1998-2007.	284 graduates of programs in collective health in Brazil between 1998 and 2007	Quantitative cross-sectional study with application of electronic questionnaire	There was a tendency of rejuvenation with the passage of three years in the academic masters, and a greater range of older graduates in the professional masters and doctorates; despite the increase in the number of men and married students in professional master's degree courses. The predominance of students from health science was also observed, followed by the human, biological, exact and earth sciences
Ramos et al., 2010	To analyze the perceptions of graduates of the Nursing Master Program of the Federal University of Santa Catarina	88 graduates of the master's degree course in nursing	Cross-sectional qualitative study. Use of questionnaires applied to master's in nursing graduates	The master's degree in nursing has proved to be a recognized and valued space for building and consolidating innovative knowledge in face of the challenges that are required for a new configuration of daily health work
Mortal et al., 2010	To analyze characteristics, limits and possibilities of the professional masters in the health area, using the vision of the graduates of the Oswaldo Cruz Foundation	66 graduates of three professional master programs from Fiocruz and 33 immediate supervisors	Quantitative cross-sectional study with application of electronic questionnaire	The article discusses the limits and possibilities of the masters, emphasizing the relevance of the evaluation of the processes for institutional development. Despite the satisfaction of the graduates, the study identified the institution's difficulties in incorporating some innovations, including those related to institutional management
Estevam and Guimarães, 2011	To discuss the limits and possibilities of the masters, emphasizing the relevance of the evaluation of the processes for the institutional development and to identify the institution's difficulties in incorporating some innovations, including those related to institutional management	39 graduate students; 8 men and 31 women	Quantitative cross-sectional study with application of electronic questionnaire	The main reasons for joining the program were the interest in teaching and the desire to conduct research. The course and the institution were considered "very good" or "great". 26% of students published their dissertations and 38% acted as supervisors of work, most of them working in public institutions.
Gutiérrez and Morales, 2011	To describe the relation between the functions declared in the model of the graduate's profile of a master program in Cuba and the principles of advanced education	Documents from the master program	Descriptive documentary quantitative study	It was evident that there was a link between the functions of the ideal model of graduates from the master's degree in Nursing and the principles of advanced education

Continue

Torres; Toste and Pérez, 2013	To present the main experiences accumulated in the Masters of the National Institute of Environmental Health of Hygiene, Epidemiology and Microbiology of Cuba	Data from 235 graduates of the 17 classes that finished the Master's between 1990 and 2009 were analyzed	Descriptive documentary quantitative study	The majority of the graduates were urban center workers (40%). Physicians (57.4%) predominated, with a greater participation of the province of Havana, 59.1% being female, with mean age of 40 years. There was a greater focus on risk assessment and risk management. It was emphasized the contribution of the program for the training of professionals to the Ibero-American countries
Hortale et al., 2014	To analyze the trajectory and professional satisfaction of graduates of doctoral courses in the health area of the Oswaldo Cruz Foundation (RJ), in the areas of Collective Health, Biosciences and Health Care	173 respondents in the areas of collective health, biosciences and health care, between 1984 and 2007	Quantitative exploratory study with application of electronic questionnaire	Most were satisfied with the program. As to its contribution, "social relevance of work", and "opportunity for new learning and exercise of creativity" prevailed. The motivation for choosing the institution was mainly due to the interest in the research lines. Among the productions, articles (n = 117) and book chapters predominated (n = 36). The course was evaluated as excellent and good, mainly for the choice of subject matters (75.6%), content (78.8%), teaching staff (85.3%) and thesis orientation (85%).
Munari et al., 2014	To analyze the production of knowledge generated by professional nursing degrees from the Fluminense Federal University, Unesp de Botucatu and the Federal University of Santa Catarina	127 works of three professional master programs in nursing (2006 to 2012)	Quantitative descriptive study by documentary analysis of course completion papers	There was a concentration in the organizational (n = 66, 52%) and care (n = 58, 45.7%) areas, predominance of qualitative studies and research lines involving adult care, management, education and health
Souza et al., 2014	To problematize the scientific field of Food and Nutrition, from the perspective of graduates of máster programs in Brazil, examining aspects related to social relations in which the training for teaching is embedded	643 graduates from the 10 graduate programs in the area of Food and Nutrition (among the 18 existing ones), that made available lists with contacts of the graduates. The final sample consisted of 177 subjects who answered the questionnaire	Quantitative cross-sectional study carried out by sending electronic questionnaires (Google docs)	88% of the respondents were nutritionists and female. The dissertations of 63% of the graduates were published. The insertion in teaching activities increased from 28% to 57% after the program. 55% hit their expectations. The main motivation for admission (71%) was to improve the teaching career. There was a significant increase in the inclusion of graduates in public institutions. Regarding changes in professional life attributed to the masters, greater self-confidence, peer recognition and salary increase were mentioned
Díaz Rojas et al., 2014	To evaluate the impact on the perception of the graduate regarding the influence of the Master's in Medical Education on teacher preparation	36 graduates of Master programs in Medical Education in the eastern provinces of Cuba	Documentary analysis and quantitative cross-sectional study carried out through the application of a questionnaire	The graduates acknowledged the positive influence of the master in their personal preparation for didactic and methodological work. There was also an increase in the preparation of graduates for teaching activities at undergraduate and graduate levels, as well as in the organization and direction of teaching work. In all dimensions evaluated, a high positive impact was noted, despite the greater variability in the dimension "organization and direction of teaching work". The categories of didactics and methodological work were those that received the highest score
Díaz Rojas et al., 2015	To evaluate the graduate perception about the influence of the Master's in Medical Education on the scientific development	55 graduates of Master programs in Medical Education of 8 cities of Cuba	Documentary analysis and cross-sectional qualitative study carried out through the application of a questionnaire	68% of graduates incorporated research activities during and after the course. The masters had a very high impact in relation to the application of science in the professional activity of the graduates and in their intellectual production
Díaz Campos; Llanes and Fariñas. 2016	To describe the results of the evaluation of the social relevance of the Master program in Medical Humanities	8 professors, 21 students and 18 graduates from the Center for the Development of Social and Humanistic Sciences in Health of the University of Medical Sciences of Camagüey (Cuba). The report of the technical committee on the external evaluation of accreditation of the program was also analyzed	Application of questionnaire and interview (qualitative), besides quantitative documentary analysis	Among the main contributions of the program were the development of research skills, participation in events and the application of scientific results. As for the acquired skills, the critical analysis capacity of the scientific literature was the most prominent item. Graduates acknowledged the program's social needs, the quality of teachers and the potential to contribute to professional performance. 47% of graduates emphasized the importance of the course for the occupation of administrative, teaching or research positions, but 62% complained for being questioned by the time spent studying

The frailties mentioned referred to the impossibility of conducting in-depth studies on specific subjects (Barros *et al.*, 2008); lack of support to become researchers and conditions for adequate productivity (Pires, 2009), and the institution's difficulties in incorporating innovations (Hortale *et al.*, 2010). Among the contributions for the professional development of the graduates, highlights were also given to the construction and consolidation of innovative knowledge for the professional practice in health area (Ramos *et al.*, 2010); the development of skills for teaching and research (Estevam and Guimarães, 2011; Díaz Campos, Llanes and Fariñas, 2016); the training of professionals with skills to transcend the barriers of their country (Torres, Toste and Pérez, 2013); the social relevance of the dissertation and the program (Hortale *et al.*, 2014; Díaz Campos, Llanes and Fariñas, 2016); the increase of the insertion in teaching activities and in public institutions (Souza *et al.*, 2014); and the application of science in the professional activity (Díaz Rojas *et al.*, 2015; Díaz Campos, Llanes and Fariñas, 2016). Graduates also mentioned, as a weakness, the questioning about the time they devoted to studies (Díaz Campos, Llanes and Fariñas, 2016). The analysis of the studies included in this review has shown a growing concern with the evaluation of higher education in the health area, especially regarding master programs. To respond to these concerns, different strategies and evaluation approaches have been elaborated, one of them being the evaluation of students who have graduated from these programs. The evaluation of the students' perception of the program of which they were a part is an important tool for the analysis of the influence of the masters in the academic and professional formation of the students.

Conclusion

Master programs in health area contribute with relevant learning for the formation of human resources, especially with respect to the construction of innovative health practices, scientific foundation, qualification, professional insertion and student empowerment. Thus, literature suggests that, although there are challenges to be faced, master programs in health area contribute positively to the academic and professional success of graduates.

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