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An experience of field work learning for healthcare providers: new perspectives between disadvantages and critical issues

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Abstract

Introduction. *The learning models used in traditional education are not very effective for the continuing education of healthcare providers. Fieldwork learning is an active learning method that is feasible in the workplace and is also suitable for professionals who possess a style of experiential learning. Guardian Angel 2.0® is a fieldwork learning project designed to promote educational skills in nurses to improve the self-care and quality of life in women affected by osteoporosis. The purpose of this article is to present the Guardian Angel 2.0® project and its results.*
Methods. *The Guardian Angel 2.0® effort lasted nine months and involved 212 nurses in the north, centre and south of Italy. A socio-demographic questionnaire, an evaluation scale of the learning process and a participants' satisfaction questionnaire were used to evaluate and monitor the fieldwork learning project.*
Results. *Out of the 212 nurses who participated in the project, 119 (70%) completed it. The mean age of these participants was 48 years (± 7.98), and 83.5% were female. About half of the participants (52.0%, 55.4% and 45.0%, respectively) were good (a) at respecting deadlines, (b) at using the methodological instruments and (c) the information tools properly. Almost all nurses considered the project to be very relevant (96.4%). In regards to the project's quality, the nurses perceived it as excellent (51.0%) and very good (48.5%). Finally, the project was considered very useful or useful by 100% of nurses.*
Conclusion. *The general satisfaction of nurses was high. The fieldwork learning was relevant and useful for developing educational skills in nurses. It would therefore be appropriate to use fieldwork learning in clinical settings to improve the existing experience of healthcare providers and thereby reduce the difficulties of transforming the knowledge from a theoretical to a practical level and to promote the development of new behaviours when the existing ones become obsolete or inefficient.*

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Introduction

The continuing education of healthcare providers is recognized as a necessity, a priority and also an opportunity (1-8). It is a necessity for the health system to respond to changing needs and a priority for health organizations to develop and maintain their appropriateness and competitiveness. Furthermore, continuing education is an opportunity for healthcare providers to unceasingly develop their own skills and maintain or increase their job satisfaction and personal motivation (2, 4, 9). The learning methods followed by healthcare providers when delivering continuing learning processes are different from those employed by traditional pedagogy, which is based on knowledge transmission in a delimited place (e.g. a classroom). These traditional learning methods have turned out to be very ineffective in a professional context (10-12) when an adult audience is asked to follow a passive learning pathway, which is typical of the traditional pedagogical model they experienced during their childhood (13, 14).

Several individual factors are related to adult learning (13-17):

a) Knowledge need: The need to know why they are learning a specific idea and what their learning will be useful for.

b) Self-concept: Adults are more autonomous than children, a fact which can trigger resistance mechanisms during the educational process.

c) The role of past experience: Adults can both activate prejudices and integrate new knowledge by comparing these new situations to their past experience.

d) Willingness to learn: This willingness has been linked to what is necessary: that is, the final advantage that comes from an effort.

e) Learning-oriented attitude: For adults, learning is connected to real life, problem solving or the performance of specific activities.

f) Motivation: The willingness to invest energy and resources in training and learning activities for one's personal satisfaction (self-esteem, improvement of one's employment status, etc.).

Personal motivation is a very important aspect of educational activities. It can be classified into three models that define the behaviour of people willing to start an educational pathway: a) *motivation to participate* influences the decision to start, continue and conclude an educational pathway; b) *motivation to learn* influences the active participation and effort they put forth during the educational process; and c) *motivation to use the contents of the education* impacts on the commitment and the effort to modify their professional practice or to criticize personal attitudes and behaviour (2, 9, 16, 18, 19).

Furthermore, some organizational factors (e.g. working shifts) can limit access to traditional classroom-based education because of their incompatibility with the working schedule. In contrast, an educational pathway involving healthcare providers in an active way has more chances to be effective (20). The education process effectively modifies professional practice and healthcare outcomes when it provides participants with opportunities to confront their problems and apply the tools they have learned and been given in a dynamic way (1, 21-28). In healthcare, many studies have pointed out that traditional educational activities (e.g. classroom-based courses, where the participant is passive) are not very effective at improving professional practice or the healthcare outcomes for patients (21, 22). Further studies will be useful to establish which methods are more successful at changing the behaviour of the healthcare providers to obtain the best healthcare outcomes (22, 29, 30).

Field work learning in a continuing medical education system

The current system of continuing medical education (CME) involves three methods to provide educational activities: (a) classroom-based education, (b) distance education

and (c) fieldwork learning. In a blended education model, the three methods are used synergistically.

Classroom-based education is provided by an educator in a classroom for a limited amount of time. In distance education, the participants are not physically present during the lessons, but they can learn from different places and at different times. Finally, the fieldwork learning type occurs when learning activities take place in healthcare facilities during professional practice. In the workplace, every situation and every moment can be identified as a learning occasion (31). The fieldwork learning is suitable for healthcare providers who are more oriented to learn through their experience (32). Fieldwork avoids or reduces difficulties for transferring knowledge from theory to practice (32). In this method, the learning processes arise and develop within operational contexts, where the procedures, the experience and the tools used in the organizational realities are considered the central aspects. For these reasons, fieldwork learning is suitable to modify behaviours and to overcome obsolete and ineffective routines.

Fieldwork learning is based on a multidimensional interpretation of learning processes and includes both cognitive aspects and experiential aspects, which arise from professional practice (10). Professional practice, experience and how we conceive it are essential elements in this type of education. The educational interventions are characterized both by a high level of interactivity and also the responsibility to employ the learned knowledge in professional practice using adult learning methods (14-16). Experiential knowledge can be developed using these educational methods (10, 33, 34). Learning thus becomes a continuous development process for the person and the healthcare provider, as the experiential learning model explains (35-39). The experiential learning model is based on practical experience, which can be cognitive, sensorial or emotional. This learning process is performed through the experience of situations and activities where the person uses his or her skills and resources to reorganize educational concepts. Through structured and systematic reflection upon the experience, reflexive and transformative learning provides the bases to change professional and organizational behaviours.

The type of fieldwork learning activities that can be currently accredited in the CME system are individual training with a tutor, participation in working/study or improvement groups, involvement in research and a clinical and/or care audit. Fieldwork learning is an educational opportunity that is still developing within health organizations due to the efficacy of the active involvement of the participants and its effects on the planning of the learning activities.

On the basis of these considerations, the aim of this article was to describe a fieldwork learning project called Guardian Angel 2.0® and its results.

The Guardian Angel 2.0® Fieldwork Learning Project

The Guardian Angel 2.0® Project is aimed at promoting educational skills in nurses in order to improve the self-care and quality of life in women with osteoporosis (40).

Fieldwork was the most popular educational method in the Guardian Angel 2.0® Project. Nurses involved in this project were trained to improve their skills in planning, managing and evaluating therapeutic educational interventions for women suffering from osteoporosis. This project was promoted by the Department of Biomedicine and Prevention of the Tor Vergata University of Rome, the Italian Centre of Excellence for Nursing Scholarship and the Italian Study Group of Severe Osteoporosis in Orthopaedics.

The educational pathway was structured as a blended educational project and was credited by the provider "Format" in the CME system within the "improvement project" typology. The project was organized in different phases and methods with a particular focus on the fieldwork learning method. The educational pathway began with a classroom-based presentation meeting, which was intended to stimulate the interest of nurses in osteoporosis and also to identify nursing skills for promoting therapeutic compliance in patients affected by this disease. Furthermore, during the classroom-based presentation meeting, the entire educational pathway was presented along with its fieldwork learning opportunities and tools. This project included 10 work groups with about 20 nurses each; the groups worked simultaneously in different parts of Italy from March 2014 to November 2014 and were divided according to their geographical origins. During this period, the nurses planned, organized and evaluated educational therapeutic pathways for women suffering from, or at risk of, osteoporosis in both inpatient and outpatient settings.

The fieldwork learning experience involved the knowledge and testing of tools and methods for therapeutic education in daily clinical practice. Before the fieldwork learning began, a classroom-based educational event was carried out to provide theoretical and extensive knowledge about osteoporosis, the main risk factors, pharmacological compliance and the correct lifestyles. Furthermore, during the classroom-based educational event, the nurses were shown methods and tools for motivational interviews with patients. These aspects allowed nurses to manage their fieldwork learning. During this educational process, the participants actively improved their managerial, relational and educational skills by experimenting with educational and motivational pathways for patients with osteoporosis.

At the end of the fieldwork learning experience, 10 conclusive meetings were held in 10 different Italian cities using a classroom-based method to present and spread the results of the project and reflect on the improvements made in osteoporosis care procedures.

Methods

Participants

The Guardian Angel 2.0®'s fieldwork learning project involved 212 nurses from the north, central and southern areas of Italy that were grouped into 10 macro-regions: Piedmont and Liguria; Lombardy and Aosta Valley; Veneto, Friuli-Venezia Giulia and Trentino-Alto Adige; Tuscany and Emilia; Abruzzo, Molise and Marche; Latium and Umbria; Campania; Calabria and Sicily; Apulia and Basilicata; Sardinia. The inclusion criteria of participants were as follows: a bachelor's degree in nursing or equivalent qualification, clinical activity in an outpatient setting with the possibility of involving patients at risk for or suffering from osteoporosis, and access to and the ability to use a personal computer and an internet connection.

Instruments for monitoring and evaluating the educational process

The following instruments were used to monitor and evaluate the educational process:

Socio-demographic questionnaire. A socio-demographic questionnaire was used to collect information from the participants, such as their age, gender, level of education in nursing, years of experience in nursing, expertise with information technology, knowledge of osteoporotic disease and experience in caring for patients with osteoporotic disease.

Evaluation scale of the learning process. An evaluation scale of the learning process

was used by the project managers to monitor three aspects: a) compliance with deadlines; b) level of use of methodological instruments; and c) level of use of information tools. A four-level evaluation mode (very good, good, fair, poor) for each of the three aspects was employed on the scale. On the basis of objective evidence, such as compliance with deadlines or through other data collected through interviews and direct observations, the project managers assigned the score for each participant at the end of the project.

Satisfaction questionnaire. The three-item satisfaction questionnaire of the CME system in Italy was used to investigate the relevance, quality and usefulness of this fieldwork learning project (41). These three aspects were assessed by the participants using a response scale ranging from 1 to 5. For the relevance, a score of 1 meant "irrelevant", and a score of 5 indicated "very relevant". In regards to quality, a score of 1 corresponded to "very poor", and a score of 5 was "excellent". For utility, a score of 1 meant "useless", and a score of 5 "very useful".

Data collection

The data collection took place for a period of nine months from March through November 2014 in all ten working groups, composed of about 20 nurses each. The socio-demographic questionnaire was administered to all participants before the start of the project. At the project's end, the evaluation scale of the learning process was filled out by project managers based on the monitoring carried out during the nine months of fieldwork learning. In addition, at the end of the project, the satisfaction questionnaire was administered to all participants.

Results

The average age of the 212 nurses who participated in the project was 48 years (± 7.98); 177 (83.5%) were female, and 35 (16.5%) were male. In this first group of nurses, 41 of them did not actually attend any training activity despite having initially expressed their intention to join the project. Therefore, our final sample consisted of 171 nurses who participated effectively in the activities of the project. Of these, 119 (70%) completed the study, while 52 nurses left before completion (30%). The mean age of those who completed the project was 47.3 years (± 8.4), while the nurses who left the project had a mean age of 48.6 years (± 6.9). In regards to the nurses' qualifications, 136 nurses (79.53%) had earned a registered nurse (RN) degree at a regional school, 8 (4.67%) held a diploma in nursing and 27 (15.78%) had completed a bachelor's degree in nursing. In addition, 48% of the nurses had a post-graduate degree/title, usually a first-level master's degree. The average number of years of experience in nursing was 23 (± 8.4).

When the nurses were asked about their amount of professional experience in different healthcare settings (orthopaedics, internal medicine/geriatrics, surgery, intensive care, rheumatology and community and outpatient care), 28% reported experience in one of these areas, 30.41% in two areas, 19.30% in three areas and 9.35% in four-six areas. The areas where most nurses had gained professional experience were internal medicine and/or geriatrics (49%) and orthopaedics (40%). The specific experience of caring for patients with osteoporosis was reported by 24% of the sample. At the same time, 88% of nurses claimed to know the pathology of osteoporosis and its related drug treatments. The ability to use computer systems connected to the internet was also investigated to assess the nurses' potential for completing educational activities during the project. We found that 90% of participants could access the internet from their workplaces, and 95% also went online from home (Table 1).

Table 1 - Socio-demographic characteristics of nurses (*N*=171)

	Mean (SD)	Range	n (%)
Age (years)	47.3 (8.4)	25–63	
Sex			
Female			136 (79.53%)
Male			35 (20.46%)
Basic education			
Regional diploma			136 (79.53%)
University diploma			8 (4.67%)
Bachelor's degree			27 (15.78)
Postgraduate education			
Master's degree			26 (13.45%)
University specialization			55 (32.16%)
Master's degree and university specialization			4 (2.33%)
No postgraduate education			86 (52.06%)
Years of experience as a nurse	23.39 (8.4)	1–40	
Areas of healthcare experience			
1 area			48 (28.07%)
2 areas			52 (30.41%)
3 areas			33 (19.30%)
4–6 areas			16 (9.35%)
No areas			22 (12.87%)
Knowledge of osteoporosis and drug treatments			150 (88.0%)
Specific experience in caring for patients with osteoporosis			40 (24.0%)
Internet access			
Internet access in the workplace			154 (90.1%)
Internet access at home			163 (95.3%)

Healthcare areas (orthopaedics, internal medicine and/or geriatrics, surgery, intensive care, rheumatology, community and outpatient care)

Compliance with deadlines was very good for 24% of participants, good for 27.9%, fair for 16.6% and poor for 31.4%. The level of use of methodological instruments was rated as very good by 24% of participants, good by 31.4%, fair by 8.7% and poor by 35.8%. Finally, the reported level of use of information tools was very good for 24.5% of the nurses, good for 20.5%, fair for 44.5% and poor for 10.5% (Table 2).

The nurses' degree of satisfaction was also very high. Almost all nurses considered the project to be very relevant (96.4%). The perceived project's quality was excellent according to 51% of the participants and very good for 48.5%. Finally, the project was evaluated as very useful by 50% of participants and useful by the remaining 50% (Table 3).

Discussion

The *learning by doing* and *learning by thinking* strategies used in this project made it possible to "learn by doing", and also to highlight the professional experiences and skills of the participants (2, 18, 24, 35), who were able to test and review their "doing" through reflection on the new experience.

Table 2 - Evaluation of the learning process for the nurses involved in the project ($N = 171$)

	n (%)
Compliance with deadlines	
Very good	41 (24.0%)
Good	48 (27.9%)
Fair	28 (16.6%)
Poor	54 (31.4%)
Use of methodological instruments	
Very good	41 (24.0%)
Good	54 (31.4%)
Fair	15 (8.7%)
Poor	61 (35.8%)
Use of information tools	
Very good	42 (24.5%)
Good	35 (20.5%)
Fair	76 (44.5%)
Poor	18 (10.5%)

Table 3 - Nurses' satisfaction toward the fieldwork learning project ($N = 171$)

	n (%)
Importance of the topics discussed to meet the need to improve their knowledge	
1: Irrelevant	0 (0%)
2: A little relevant	1 (0.6%)
3: Neither relevant nor irrelevant	5 (3%)
4: Somewhat relevant	74 (43.2)
5: Very relevant	91 (53.2%)
Educational quality of the project	
1: Very poor	0 (0%)
2: Poor	0 (0%)
3: Fair	1 (0.6%)
4: Good	83 (48.5%)
5: Excellent	87 (50.9%)
Utility of the project for education/professional growth	
1: Useless	0 (0%)
2: A little useful	0 (0%)
3: Neither useful nor useless	0 (0%)
4: Useful	86 (50.2%)
5: Very useful	85 (49.8%)

The Guardian Angel 2.0® fieldwork learning project has simultaneously highlighted both its effective and critical elements through its evaluations of the learning process, the satisfaction of the participants and the drop-out rates of the participants. In fact, with regard to compliance with the deadlines, more than half of the participants (about 52%) had positive scores (very good and good); conversely, about 31% were assessed as poor. The level of use of methodological instruments showed similar results for compliance with deadlines, with very positive evaluations for more than half of the participants (55%) and negative for 36%. The level of use of information tools showed about 44% of positive evaluations. This evaluation was lower when it was compared to the other two aspects (compliance with deadlines and the use of methodological instruments); however, in this case, only 10% had a poor evaluation. These results for compliance with the deadlines and the use of methodological instruments have highlighted a rather similar trend that was likely related to the direct responsibility of the participants in the management of their education (2, 4). The use of information tools is independent of the aspects of empowerment and motivation since it has been correlated with a specific skill that the participants possessed.

Overall, the nurses' levels of satisfaction were highlighted in the evaluation of the relevance, quality and utility of the fieldwork learning project and showed good results. The positive results of this project were probably related to the active involvement of participants, who could directly govern their time and also their learning modalities. In fact, the opportunity for self-government is one of the elements that characterizes

the effective education in adults (2, 9, 16-19). This level of accountability probably contributed to our positive results but probably influenced also the dropout rate of the project, which had already been highlighted in 30% of the initial group. Indeed, it is possible that participants who had not implemented this mechanism as a form of self-government were not motivated to continue to learn actively (2, 4).

In general, the benefits of this fieldwork learning project were related to active learning. The project took place in the working environments of a group of nurses and set out to help them establish an educational relationship with patients (31). The learning processes were developed within the nurses' workplace areas while also taking into account the modalities the nurses used to work. This learning process was realized in the times and places of clinical practice and was particularly suited for professionals, who possess previous experiences and a learning-oriented style to rework these experiences, allowing them to reduce or skip the problems related to the transfer of knowledge from the theoretical to the practice level (32).

Conclusions

Fieldwork learning was relevant and useful for the involved professionals to develop educational skills. In fact, nurses were able to apply these skills in their care of osteoporotic patients, which had the combined effect of increasing their knowledge, developing their ability to recognize and manage symptoms and improving patients' adhesion to treatments (40, 42-44).

From 2003 until today, this model of education has been developed and used in the Italian Health System, but it is still the least used type out of the three (classroom-based education, distance education and fieldwork learning). Compared with the more than 32,000 classroom-based education events (93%) and the 1,600 (4%) distance education projects accredited in the CME system of the Ministry of Health in 2014, fieldwork learning was included in only around 800 projects (2%). In 2015, the percentages overlapped or were classified as fieldwork learning in 500 projects (1.5%). It would be appropriate if fieldwork learning were mostly used to enhance the existing experiences of healthcare providers and also to promote the development of new behaviours in healthcare providers when these behaviours are obsolete or ineffective. This model of education can be applied in any situation, time and work setting and it is appropriate for healthcare professionals because they learn more easily by experience. Finally, fieldwork learning can be useful when healthcare professionals have difficulties in attending courses because a classroom-based education requires their absence from work. For these reasons, fieldwork learning should be used in more and more healthcare settings to support the continuous professional and organizational development regarding this issue.

It should also be noted that the flexibility of fieldwork learning should be considered an opportunity to use experiential resources that are present in organizations, and not as a functional mean to obtain CME credits. For this reason, it is necessary that fieldwork learning is carefully designed, managed and evaluated.

Further studies and analyses will be needed to determine what types of fieldwork learning are more useful and effective. Finally, it is necessary to evaluate any changes in the healthcare provider's behaviours via an assessment carried out before and after the fieldwork learning program.

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Riassunto

Un'esperienza di formazione sul campo per i professionisti sanitari: nuove prospettive tra svantaggi e criticità

Introduzione. I modelli di apprendimento della pedagogia tradizionale sono risultati poco efficaci all'interno della formazione continua dei professionisti sanitari. La formazione sul campo è una modalità attiva di apprendimento, realizzabile nei luoghi di lavoro e adatta ai professionisti che possiedono uno stile di apprendimento orientato all'esperienza. Il progetto di formazione sul campo Guardian Angel 2.0® è un progetto rivolto ad infermieri, con lo scopo di promuovere in essi lo sviluppo di competenze educative al fine di migliorare il self-care e la qualità di vita in donne affette da osteoporosi. Lo scopo di questo articolo è quello di illustrare questo progetto presentandone i suoi risultati.

Metodi. Il progetto di formazione sul campo Guardian Angel 2.0 ha avuto una durata di 9 mesi ed ha coinvolto 212 infermieri del nord, centro e sud Italia. Un questionario sociodemografico, una scala di valutazione del processo formativo e un questionario di gradimento del progetto di formazione sono stati utilizzati per raccogliere rispettivamente, dati sociodemografici e per valutare e monitorare il processo formativo.

Risultati. Dei 212 infermieri partecipanti al progetto, 119 (70%) hanno ultimato il percorso. L'età media dei partecipanti era di 48 anni (± 7,98), l'83.5% era di sesso femminile. Il rispetto delle tempistiche da parte dei partecipanti, è stato buono e molto buono per il 52% e insufficiente per il 31,4%. Il livello di utilizzo degli strumenti metodologici, è stato buono e molto buono per il 55,4% dei partecipanti e insufficiente per il 35,8%. L'utilizzo degli strumenti informatici è risultato buono e molto buono per il 45% dei partecipanti e insufficiente per il 10,5%. Il gradimento degli infermieri è risultato elevato per rilevanza, qualità e utilità percepita del processo formativo. Il processo formativo è stato ritenuto molto rilevante per il 96,4%, la qualità percepita è risultata eccellente per il 51% e molto buona per il 48,5% ed è stato molto utile e utile per il 100% dei partecipanti.

Conclusioni. Il gradimento dell'evento formativo da parte dei partecipanti è risultato complessivamente elevato. La modalità formativa sul campo è risultata rilevante e utile per sviluppare le competenze educative dei professionisti, che hanno potuto applicarle nell'assistenza a pazienti affetti da osteoporosi. Sarebbe opportuno che tale modalità fosse maggiormente utilizzata nelle realtà operative per valorizzare le esperienze esistenti, ridurre le difficoltà dovute al trasferimento di conoscenze dal livello teorico a quello applicativo, promuovere lo sviluppo di nuovi comportamenti quando questi risultino superati o poco efficaci.

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