European Journal of Management Issues

Volume 26 (1-2), 2018, pp.39-47

DOI: 10.15421/191805

Received: 08 February 2018
Revised: 22 February 2018; 18 April 2018
Accepted: 01 June 2018
Published: 25 June 2018

UDC classification: 631.1

JEL Classification: Q12, C10, Y2

How can assessment systems be used to evaluate healthcare activities in the care farms? Insights from a systematic literature review

***F. P. Salvatore*[‡]**
***F. Contò*[#]**

Purpose – to identify in the literature the main activities of Social Agriculture and elaborate a framework easily readable to manage them.
Design/Method/Approach –systematic literature review.
Findings. Formulation of an interpretative framework for evaluation and management of the existing Social Agriculture actions trough a system-describing pattern.
Theoretical implications. Care farms are the most innovative expressions of the agriculture multifunctional. Through the development of complementary activities related to the production of food, they represent an opportunity to discover the innumerable resources of the rural world. An assessment system of the care farming activities, allows for reaching a clear definition of the services for the citizens.
Practical implications. Individuals can use Social Agriculture as a way out of job-related stress. Firms, local, and national authorities should evaluate, support, and manage Social Agriculture.
Originality/Value. This study for the first time concludes that the rural context and agricultural process are the drivers to promote social integration in the communities. Therefore, the meaning of the Social Agriculture assessment systems obtaining a great importance both for the value' increase of the farmer and for the increase of support for social policies in marginal areas.
Future research. The prospects for further studies are: future research about measures to evaluate Social Agriculture activities; tools to improve the decision-making process about future scenarios of the care processes for the society; improved services to avoid the worsening of population health status and thus, improving the process of defining social policies.

Paper type – conceptual.

Keywords: care farm; system of evaluation; systematic literature review.

[‡]*Fiorella Pia Salvatore,*
Ph.D. Student, M. Econ., Department of Economics,
University of Foggia, Foggia, Italy,
e-mail: fiorellapia.salvatore@unifg.it,
https://orcid.org/0000-0001-6294-3360

[#]*Francesco Contò,*
Full Professor, Department of Economics,
University of Foggia, Foggia, Italy,
e-mail: francesco.conto@unifg.it,
https://orcid.org/0000-0002-1541-4949

Reference to this paper should be made as follows:
Salvatore F. P., Contò F. (2018). How can assessment systems be used to evaluate healthcare activities in the care farms? Insights from a systematic literature review. *European Journal of Management Issues*, 26(1-2), 39-47. doi:*10.15421/191805*.

Які оціночні системи застосовують для оцінки діяльності з догляду за фермерським господарством у сфері охорони здоров'я? Підсумки системного огляду літератури

Фіорелла Пія Сальваторе[‡], Франческо Конто[#]

[‡]Університет Фоджа, м. Фоджа, Італія
[#]Університет Фоджа, м. Фоджа, Італія

Мета роботи – виявити в науковій літературі види основної діяльності соціального сільського господарства і розробити легко розуміється методологію управління ними.

Дизайн/Метод/Підхід дослідження – системний огляд літератури.

Результати дослідження. Сформульовано розуміння методології для оцінки та управління існуючими видами діяльності соціального сільського господарства за допомогою опису системи.

Теоретичне значення дослідження. Спеціалізовані господарства по догляду – це найбільш інноваційне вираз багатофункціонального сільського господарства. За допомогою розробки взаємодоповнюючих заходів, пов'язаних з виробництвом продовольства, вони представляють собою можливість виявити незліченні ресурси сільських районів світу. Оцінка системи діяльності спеціалізованих господарств по догляду дозволяє виробити чітке визначення послуг для громадян.

Практичне значення дослідження. Люди можуть використовувати соціальне сільське господарство як один із способів подолати стрес, пов'язаний з роботою. Компанії, місцеві та національні органи влади повинні оцінювати, підтримувати і управляти соціальним сільським господарством.

Оригінальність/Цінність/Наукова новизна дослідження. Зроблено висновок про те, що сільська місцевість і сільськогосподарський процес представляють фактори, які сприяють соціальній інтеграції в громадах. Тому оцінка системи соціального сільського господарства набуває більшого значення як для підвищення значущості фермера, так і для збільшення підтримки соціальної політики в районах з невеликою сільськогосподарською цінністю.

Перспективи подальших досліджень – вивчення діяльності з оцінки соціального сільського господарства; інструменти для поліпшення процесу прийняття рішень про майбутні сценарії для суспільства процесів з догляду; поліпшення обслуговування з метою уникнення погіршення стану здоров'я населення та, таким чином, поліпшення визначення соціальної політики.

Тип статті – теоретична.

Ключові слова: ферма з догляду; система оцінки; систематизуючий огляд літератури.

Какие оценочные системы применяют для оценки деятельности по уходу за фермерским хозяйством в сфере охраны здоровья? Итоги системного обзора литературы

Фиорелла Пия Сальваторэ[‡], Франческо Конто[#]

[‡]Университет Фоджа, Фоджа, Италия
[#]Университет Фоджа, Фоджа, Италия

Цель работы – выявить в научной литературе виды основной деятельности социального сельского хозяйства и разработать легко понимаемую методологию управления ими.

Дизайн/Метод/Подход исследования – системный обзор литературы.

Результаты исследования. Сформулировано понимание методологии для оценки и управления существующими видами деятельности социального сельского хозяйства посредством описания системы.

Теоретическое значение исследования. Специализированные хозяйства по уходу – это наиболее инновационное выражение многофункционального сельского хозяйства. Посредством разработки взаимодополняющих мероприятий, связанных с производством продовольствия, они представляют собой возможность обнаружить несметные ресурсы сельских районов мира. Оценка системы деятельности специализированных хозяйств по уходу позволяет выработать четкое определение услуг для граждан.

Практическое значение исследования. Люди могут использовать социальное сельское хозяйство как один из способов преодолеть стресс, связанный с работой. Компании, местные и национальные органы власти должны оценивать, поддерживать и управлять социальным сельским хозяйством.

Оригинальность/Ценность/Научная новизна исследования. Сделан вывод о том, что сельская местность и сельскохозяйственный процесс представляют факторы, которые содействуют социальной интеграции в общинах. Поэтому оценка системы социального сельского хозяйства приобретает большое значение как для повышения значимости фермера, так и для увеличения поддержки социальной политики в районах с небольшой сельскохозяйственной ценностью.

Перспективы дальнейших исследований – изучение деятельности по оценке социального сельского хозяйства; инструменты для улучшения процесса принятия решений о будущих сценариях процессов по уходу для общества; улучшение обслуживания во избежание ухудшения состояния здоровья населения и, таким образом, улучшение процесса определения социальной политики.

Тип статьи – теоретическая.

Ключевые слова: ферма по уходу; система оценки; систематизирующий обзор литературы.

Introduction

In recent times, agriculture is changing since it is not just an income source, but it is a useful solution to give value in the agricultural areas and a good solution to increase the well-being state of disadvantaged people or with health problems (*Mueller, & Mueller, 2010*). Answering these needs, agriculture becomes multifunctional allowing not only to distinguish the tools available to citizens but also to link socially inclusive actions with care activities as provided by the national institutions (*Zasada, 2011; Contò et al., 2013; Hassink et al., 2013*). Integration between the primary sector and the new ideology of business is achieved through the provision of socio-sanitary services in the care farms (*Zasada, 2011; Hine, 2008*). The entities guide their services furniture towards several kinds of clients with different health problems such as psychological and/or learning difficulties (*Sempik et al., 2010*). The activities that involve the participants are different, for example only for day-activity, or therapy, or spending time with animals (*Artz, & Davis, 2017; De Krom, & Dessein, 2013; Leck et al., 2014*). These lead the agriculture to play an important role in the treatment, rehabilitation and general care of people with disabilities. In the last decades, the agriculture' branch called Social Agriculture (SA), has been institutionalized becoming an ordinary action for those who had behaviour problems or other diseases. The idea of the farm involved in the green care, has changed over time; it was seen like a facility able to re-establish the normality concept among the participants to became a new way to observe the people staying occupied, have discovered the role of responsibilities actually expedite rehabilitation and return to the society (*Sempik et al., 2010*).

In a framework like that, the European Union has focused its attention on multifunctional farming aspects combining the principal function of the agriculture with therapies and alternative ways to help people in difficult situations. In Europe there are many initiatives launched about this purpose including the famous initiative called "European Farming for Health" (*Elings, & Hassink, 2006*), launched in 2004 by the University of Wageningen. It represented a synthesis of a varied panorama: from the Dutch farms to the green care diffused in Scandinavian and Anglo-Saxon Countries, from England's horticultural therapy to the Social Agriculture in Italy. The cooperation has created a huge European network of 11 representatives from different countries in which some nations as Germany, Ireland and Slovenia have not only promoted private investment but they have taken on a public set-up has leading to the emergence of "institutional" companies engaged in the dissemination of good practices (*Niggli et al., 2008; Darnhofer et al., 2010; Bragg et al., 2013*). In the Holland context, thanks to the Exemption from Medical Expenses (*EMEA*), there are an increasing number of structures that decide to organize associations or foundations at regional level for admission to *EMEA*. As far as the efficiency of the practice, Dutch law provides a set of rules for the recruitment of farm staff. More specifically, employees must have different skills to assist patients in the most appropriate way and must have professional knowledge necessary for the sector. Holland is not the only example of how this policy is going to be successful. Interest in farming practices has grown in the various European countries in simultaneous times and a process of analysis has been initiated in the field of welfare services and, more generally, on the development of the local-communities' quality of life.

Although the SA is growing rapidly, in literature there is a lack of assessment system to consider the health evolution. The problem is determined in the not easy identification and definition of all the characteristics related to the different realities. SA assessments take into account the evaluation of some pillars, such as environment, society and economy (*Gómez-Limón, & Sanchez-Fernandez, 2010*), which are implied for the assessment of the care activities at regional, national and international levels (*Binder et al., 2010*). At the farm level, the assessment systems encounter some specific problems as regarding the data collection or to evaluate the environment or the social context in which the activities with disabilities people are performed. Despite these complications, some studies have suggested to develop different methodologies to assess and manage the green care activities (*Artz, & Davis, 2017; Steigen et al., 2016*), but additional attempts are required to create an easily readable framework about the findings identified till now. In accordance with the existing studies, this research suggests a way to examine in-depth the activities carried out in a care farm. Through a deepened systematic literature review, the goal of this study is to create an evaluation-system-based framework for the therapies and activities involving disabled people, with the aim of ranking farms according to different objectives, in order to elaborate future perspectives re-qualifying rural areas with a socially useful approach.

In many sectoral studies (*Mulder, 2006; Adato, & Meinzen-Dick, 2007*), there are no actions about the care farming assessment but just insights useful to answer specific problems (Maaz *et al.*, 2018). The sector reconsideration comes from understanding SA as a new way of conceiving rurality and opens up new points of view on the recent welfare systems (*Relf, 2006*). On the other hand, the growing demand for the necessary services and the resulting reduction in public funds, is reflected more heavily in agricultural areas where there is a high percentage of elderly people that incur high costs (*Sayadi et al., 2009; Contò et al., 2015*). This is verifiable in the local welfare systems because they are more effective in promoting actions to increase the efficiency of traditional networks based on reception, reciprocity and promotion of practices enhancing the individual's well-being (*Hart, 2013; Hassink et al., 2016*). In this sense, social farming shows itself as an innovation capable to give benefits not only for the public health sector, but also for who could improve their social-health status with other activities (*Hassink et al., 2017*). A better understanding of the therapeutic interventions effects in the SA can develop innovative tools in the field of healthy lifestyle (*Fraser et al., 2005; Fritze et al., 2008*) and, at the same time, be a strategic element in the evolution of a multifunctional farming practice.

The objectives of this new insight, are:

– mobilize resources still hidden;
– ensure a dense network of social protection;
– join care activities and work inclusion actions (*Barrientos, 2014; FAO, 2015*).

Today, the phenomenon has evolved and the main actors are not just farmers and agricultural entrepreneurs but also agricultural engineers and social-health therapists. Their activity is to rediscover multifunctionality in agriculture serving the community (*Hassink et al., 2018*). Thanks to the importance of social issues and to the presence of new operators, the agriculture role in this field has become predominant. In particular, looking for non-hospital solutions carried out in the primary sector (*Caswell et al., 2001*).

In each European country the culture of re-evaluating traditional systems is becoming increasingly popular in order to obtain innovative practices and services to satisfy the needs of health support (*Figueiredo, & Raschi, 2011*). The use of therapies for disabilities people, care for patients with chronic illnesses or even work solutions for people with social problems are examples of integration between agriculture and health services (*Zasada, 2011*). The phenomenon of care farms, therefore, contributes to spreading an innovative vision of the rural world that combines the educational and cultural services of the agriculture multifunctional concept with the ability to generate wellbeing even for those who are poor members of the society (*Pedersen et al., 2012*).

Research question

Systematic Literature Review (SLR) approach identifies what has been analyzed in the literature about the systems used to evaluate the activities performed in the care farms. In the first step, the study aims to carry out a SLR following the methodology used by *Tranfield et al.* (*2003*), *Dixon-Woods et al.* (*2004*), *Velten* (*2015*), *Bączyk et al.* (*2018*) in order to:

(1) identify the actions adopted by care farming;
(2) evaluate how different conceptions and different assessment systems about social farming, are combined in a academic debate.

As the second step, the existing actions are classified by system-describing pattern to realize an interpretative framework (*Hansen, 1996; Yin, 2009*). It allows the assessment determining strengths and weakness of the activities performed in the care farms. Successively, thanks to the literature review procedure, possible useful measures for evaluating and improving activities performed in a farm are suggested.

Methodology

According to the mentioned methodology, the studies were identified in two electronic databases: Scopus and Web of Science (WOS). Information for the reference articles trough reference lists and through meeting with experts, have been obtained.

The keywords searched have been: "care farm" and "assessment".

Inclusion and exclusion criteria have been used in the following way. As inclusion criteria, only papers published from 2007 to 2018 have been selected. The subject areas: "medicine", "agricultural and biological sciences", "social science", "environmental science", "business, management and accounting" for SCOPUS research and "agriculture", "public environmental occupational health", "health care science services", "business economics" and "sociology" for WOS research, have been used to specify the field of research.

Furthermore, the research only considers papers in English to obtain an international validity of studies. Instead, as exclusion criteria, proceedings paper, conference proceedings, special issues and dissertations have not been taken into account to avoid a dispersal of the study.

Pursuant to procedure, 43 papers in Scopus and 63 in WOS have been obtained (fig. 1).

After a descriptive analysis of the obtained database of international relevance, a content analysis to identify the therapies used in the farm and the future scenarios of the social agriculture management system will be carried out.

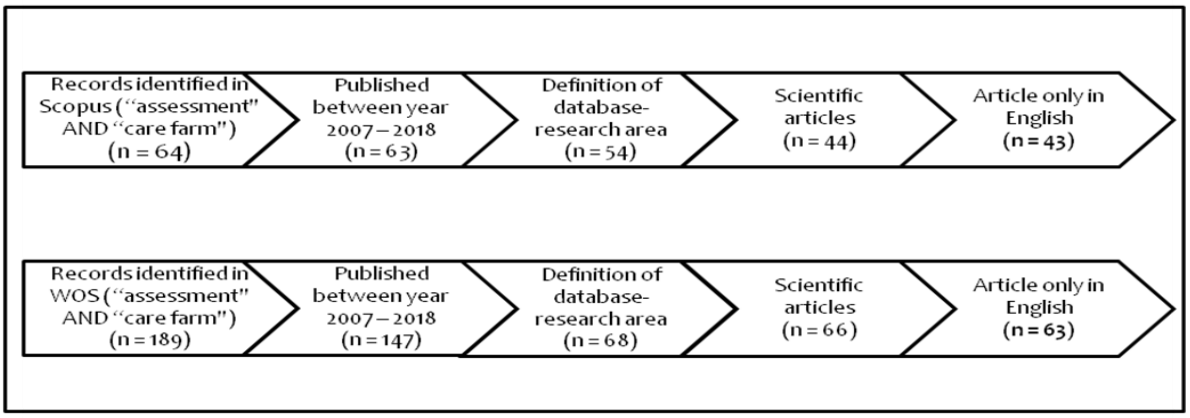

Fig. 1. Databases investigated and the total papers identified using filtering steps

Results and Discussion

According to the SLR the articles identified were filtered, sorted and confirmed for review inclusion through an iterative selection procedure as shown in fig. 1.

Following this process, the duplicates have been deleted, eligibility confirmed from abstracts and papers in full text have been reviewed considering the previous research questions. All articles subject to analysis have been re-evaluated to include or exclude themselves in the descriptive and content analyses (*Moher et al., 2009*). In total a number of 103 studies have been selected and declared positives for the SLR and relevant to answer our previous research lines.

The first step of descriptive analysis has been an analysis of the papers distribution during years from 2007 to 2018. This aspect highlights the trend of research streams during the analyzed period. In the fig. 2 it has been demonstrated that the most of research were published both in SCOPUS and WOS from 2015 and 2017 represents the years with the highest number of publications, which highlights the emerging and growing nature of the research fields.

In addition, just 6 articles have already been identified in the first two months of year 2018. This represents a forecast about another year of growth for the research streams.

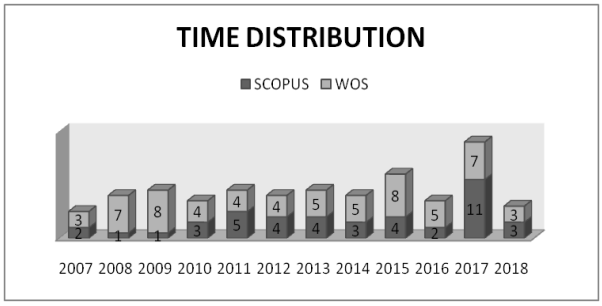

Fig. 2. The trend of research streams

The projection is also close to the researches of other authors that studied the integration of care, social activities and work inclusion actions function for the disabilities and elderly people (*García-Llorente et al., 2016; Rossignoli et al., 2017*). As regarding the geographical locations of the studies published in SCOPUS and WOS, are demonstrated in fig. 3. The outcomes were produced based on the location information contained in the menu available in the international literature databases. The graphic revealing the most studies for the research streams under review, were conducted in USA with 19% of publications identified in this geographical area. Netherlands was also another popular country for research in this field with 18% of academic articles. Instead, in the area "others", all the other countries contributing to the research in the minor part are represented.

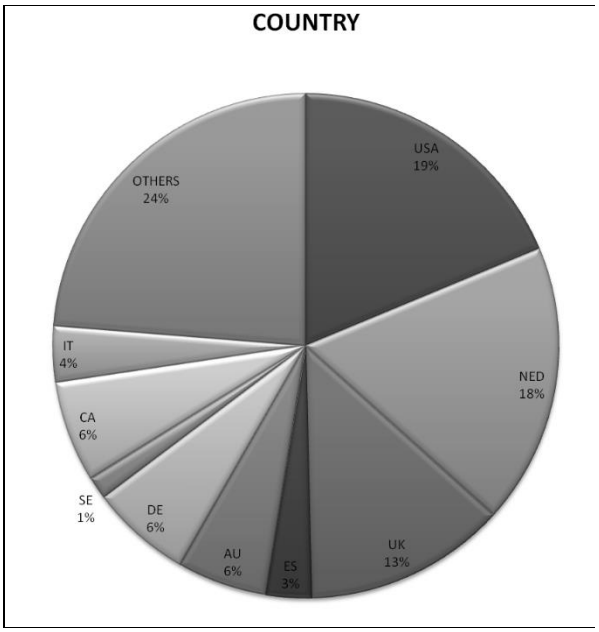

Fig. 3. The geographical locations of the studies

The finding reflects the remarkable role both of United State and some EU countries in driving the social activities development in the care farms and support the spread of some possibilities for disadvantaged people.

The following step is based on the assessment of the green care activities. Several studies demonstrate that economic analysis of the care activities' results or health analysis of the activities' effects on disabled people, are the issues more treated in the literature (*Van der Ploeg, 2007; Yin, 2009; Harbison, 2010; Hassink et al., 2018*). The studies on benefits of horticulture and animal-assisted practices, beneficiaries' types of the green care, contexts to carry out care activities, are noteworthy because reveal the typical characteristics of the countries in which they are performed (*Chan et al., 2017; Elings, 2012*). Nowadays, there are no tools that consider several and different multidisciplinary factors useful to evaluating the actions performed in the SA. The only exemption are the Hassink's studies in which economic and efficient aspects on the beneficiaries conditions are analyzed (*Hassink et al., 2012 - 2018*). Most practices in the international studies (Weltin 2013; Torske *et al.*, 2016; Artz *et al.*, 2017) regarding context specified as hospitals or specialized centers for the treatment of specific pathologies or urban contexts for the management and use of green spaces (community gardening). According to other studies about the effects produced by the occupational therapy on patients with mental illness (*Torske et al., 2016; Cipriani et al., 2018; Oh et al., 2018*), the horticulture therapy shows immediate positive reactions on life satisfaction, well-being, self-perception and on all components of the quality of life. The analyzes conducted are characterized by comparisons between groups of patients who have participated in horticultural therapy projects and groups that have participated in other projects or have not been included in any therapeutic pathway. Therapeutic contexts (previous or contemporary therapies, role of families, etc.) are not taken into consideration or totally described. Beneficiary subject of therapeutic activity represents generally the focus. As regarding the benefits deriving from the animal-assisted therapies, investigations results show benefits on the cognitive, physical and psychological level (*Artz, & Davis, 2017; Oh et al., 2018*).

In light of these main activities, it is argued that there is no method of evaluating therapies using plants or animals, even if the last experiences have multiplied both in protected contexts (hospitals, rehabilitation centers, etc.) and in production area contexts (cooperatives, companies, etc.) (*Etheredge et al., 2016; Gorman* & Cacciatore, *2017; Soga et al., 2017*). In many other researches (*Etheredge et al., 2016; Bradley et al., 2017; Kelley et al., 2017; Im et al., 2018; Lehmann et al., 2018*) there is just a collection of data and information not supported by an appropriate methodological approach. In other cases (*Aldous, 2015; Artz, & Davis, 2017*), instead, an exact method and excellent results do not correspond to the validity of the study confirmed by the academic community. All these new perspectives allow to operate a clear difference (tab. 1).

Table 1

A review of the activities performed in the main centers

Centers	Activities
Training activity centers; occupational therapy and co-therapy with rehabilitation centers; local health company; associations; municipalities and social cooperatives; hospital; psychiatric hospital; rehabilitative centers.	The green care activity plays a limited role (generally a few hours per day for a few days per week). The tasks carried out concern only part of the agricultural production process and other subjects spend their time to gardening.
Care farms; farms; agricultural social cooperatives.	People are fully involved in agricultural and related activities (agritourism, catering, educational activities, packaging, sales, etc.) carrying out different actions and contributing to the business.

Overall, many studies have adopted the participatory evaluation approach in progress (*Kelley et al., 2017; Soga et al., 2017; Cipriani et al., 2018*). It allows to deepen the process (to find out exactly the object in examining and to identify an operative evaluation model) and to improve the practices through the possible modification of the activities.

Since the use of systems to categorize the activities in this field is mostly undetected, the technique to obtain a delineated framework is the *Yin's* approach (*2009*). It focuses on the case study research, but in this context, it has been proposed for formulating an easily readable interpretative framework-model about the existing SA actions, trough a system-describing pattern. it is adopted to analyze experiences characterized by agricultural practices and participation of subjects with different problems. Each one must be considered in the evaluation process and with the system-describing pattern; the individual experiences-peculiarities are identified highlighting the strengths and weakness to take into account for the evolution of the business involved in the SA sector. A possible theoretical framework that suggests useful measures for business to evaluate how to improve the activities is shown in the tab. 2.

The framework outlined defining the strength and weakness of the most common activities carried out in a farm, contributes to define the concept of multifunctionality in agriculture, giving a strong innovative impulse to the entire agricultural sector by re-evaluating rural areas and laying the bases for the care farms' new concept (Bird, 2007; *Haubenhofer et al., 2010; Hassink et al., 2018*).

Table 2

Own elaboration about the main activities of the care farms based on Yin's study (2009)

Activities	Objectives	Strength	Weakness	Suggested measures
Education (*De Krom, & Dessein, 2013; Leck et al., 2014; Rotheram et al., 2017*)	Improve the knowledge about agricultural practices developing the natural sensitivity in disabled people.	Increased confidence in the farming community and changes the farmers' attitude.	Limited investments and/or delay in the availability of funds in setting up or expansion of SA education actions.	Multi-criteria analysis
Rural area services (*De Krom, & Dessein, 2013; Leck et al., 2014; Hemingway et al., 2016*)	Re-establish in the rural contexts a livable milieu even for the young families.	Re-population the rural areas; local development increased; provision of social services (like kindergarten and recreation activities for children and elderly) in economically viable ways.	Low level of farmers participation (because of high investments); inadequate staff to monitor the quality of the services.	Cost-benefits analysis
Rehabilitation (*Elings, 2012; Pedersen et al., 2016; Artz & Davis, 2017*)	Improve the well-being of the individual with some health problems. The activities are carried out on farms that supply their resources and expertise.	Increased independence, sense of purpose and safety-awareness.	A passive role of agriculture being part of a wider therapeutic project because of the "thaumaturgical" power of the rural context.	Before-after comparisons analysis; QoL analysis
Occupational therapy (*Dessein, & Bock, 2010; Elings, 2012*)	Help the people to re-acquire the own capacities lost due to illness or disability.	Increased expressing emotions, confidence; controlled decision-making social-relationships and anxiety.	Low political-economic support for the business that want to launch this type of therapy.	Before-after comparisons analysis; QoL analysis
Horticulture therapy (*Dessein, & Bock, 2010; Elings, 2012; Ferrini, 2016; Chan et al., 2017*)	Enable and empower clients to achieve maximum independence and improve well-being.	Improved responsibility, mental exercises, motor activities, and postural control, social function.	Few public health strategies to support the socio-ecological aspects of health.	Individual behavior analysis; satisfaction level analysis; QoL analysis
Animal-assisted practices (*Dessein, & Bock, 2010; Elings, 2012; Artz, & Davis, 2017*)	Promote improvement in physical, social, emotional and/or cognitive functioning thanks to the participation of a specially trained animal-handler team.	Increased the physical and cognitive coordination, social interaction and decreased loneliness.	Little credibility of clinical professionals to consider the incorporation of Animal-assisted therapy into practice.	Project-results verification; satisfaction level analysis; QoL analysis

Conclusions

According to the recent literature, the importance of some elements for the role of agricultural activity and for the disabilities people in the therapeutic-rehabilitation processes and in the processes of care has been highlighted. In all studies, the protagonists have shown up how outdoor' activity plays an important role for the care of different pathologies and problems. This is also confirmed by research related to the effects of exposure to nature and in particular by the presence of animals in certain therapies (*Banks, & Banks, 2002*). Animals-based treatments creating a direct relationship with the patient, affect on the psycho-affective state increasing the patient's ability to relate to others (*Berget et al., 2008*).

Moreover, the literature highlights that besides the agricultural activity, another crucial factor is the physical activity that creates an optimal rehabilitation condition and contributes at achieving clear objectives with precise rhythms (*Hine et al., 2008; Thompson Coon et al., 2011*). The cases taken into consideration carry out various methods of activities' examination. The main differences are about the main focus of the examination. In some cases, the focus is represented by the beneficiary subject and in others by the single activity. Considering the measurement approaches, the studies have developed different solutions as microanalysis of individual behavior, satisfaction level analysis, social network analysis, project verification, analysis of economic impact. They represent just an example of the criteria used to evaluate the activity' progress in the farm (*Lee et al., 2004; Kam, & Siu, 2010; Gonzalez et al., 2011; October et al., 2013*). One common element among the case studies, is the choice of quality of life (QoL) as an evaluating practices method (*Aldous, 2015; Artmann et al., 2017; De Boer et al., 2017; Fumagalli et al., 2017; Masel et al., 2017*). QoL used in social and health assessments, is also present in the economics and rural management studies. The indicator represents a comparison method for the system welfare and for the agricultural and rural sectors. In this perspective, the concept of QoL seems to bring the socio-health approach closer to the sociological approach and offers a new perspective on the analysis of SA. With the previous indicators, the evaluation of social farming practices can help to identify the elements of a new European agriculture paradigm guaranteeing multifunctional production processes (*Van der Ploeg, 2007*).

Finally, SA values diversity and gives new meaning to therapies making not only important at the health level but are embedded in more complex management processes inside in the farms.

References

Adato, M., & Meinzen-Dick, R. (Eds.). (2007). *Agricultural research, livelihoods, and poverty: Studies of economic and social impacts in six countries*. Baltimore, MD: Johns Hopkins University Press.

Aldous, D. E. (2015). Dimensions of a people-plant-place paradigm in horticultural therapy. *Acta Horticulturae*, (1093), 53–60. doi:10.17660/actahortic.2015.1093.5.

Artmann, M., Chen, X., Iojă, C., Hof, A., Onose, D., Poniży, L., … Breuste, J. (2017). The role of urban green spaces in care facilities for elderly people across European cities. *Urban Forestry & Urban Greening*, 27, 203–213. doi:10.1016/j.ufug.2017.08.007.

Artz, B., & Bitler Davis, D. (2017). Green Care: A Review of the Benefits and Potential of Animal-Assisted Care Farming Globally and in Rural America. Animals, 7(12), 31. doi:10.3390/ani7040031.

Bączyk, A., Wagner, M., Okruszko, T., & Grygoruk, M. (2018). Influence of technical maintenance measures on ecological status of agricultural lowland rivers – systematic review and implications for river management. *Science of the Total Environment*, 627, 189-199. doi:10.1016/j.scitotenv.2018.01.235.

Banks, M. R., & Banks, W. A. (2002). The Effects of Animal-Assisted Therapy on Loneliness in an Elderly Population in Long-Term Care Facilities. *The Journals of Gerontology Series A: Biological Sciences and Medical Sciences*, 57(7), M428–M432. doi:10.1093/gerona/57.7.m428.

Barrientos, A. (2014). *Antipoverty transfers and agriculture: theory and context. Background paper prepared for The State of Food and Agriculture 2015*. Social protection and agriculture: breaking the cycle of rural poverty. Manchester, UK, Brooks World Poverty Institute, University of Manchester.

Berget, B., Ekeberg, Ø., & Braastad, B. O. (2008). Attitudes to animal-assisted therapy with farm animals among health staff and farmers. *Journal of Psychiatric and Mental Health Nursing*, 15(7), 576–581. doi:10.1111/j.1365-2850.2008.01268.x.

Binder, C. R., Feola, G., & Steinberger, J. K. (2010). Considering the normative, systemic and procedural dimensions in indicator-based sustainability assessments in agriculture. *Environmental Impact Assessment Review*, 30(2), 71–81. doi:10.1016/j.eiar.2009.06.002

Bradley, L. K., Behe, B. K., Bumgarner, N. R., Glen, C. D., Donaldson, J. L., Bauske, E. M., … Langellotto, G. (2017). Assessing the Economic Contributions and Benefits of Consumer Horticulture. *HortTechnology*, 27(5), 591–598. doi:10.21273/horttech03784-17.

Bragg, R., Wood, C. and Barton, J. (2013). *Ecominds effects on mental wellbeing: An evaluation for MIND*. London: *Mind*.

Bird, W. (2007). *Natural thinking: A report for the royal society for the protection of birds. Investigating the links between the natural environment, biodiversity and mental health*. RSPB.

Caswell, M., Fuglie, K. O., Ingram, C., Jans, S., & Kascak, C. (2001). *Adoption of agricultural production practices: lessons learned from the US Department of Agriculture Area Studies Project* (No. 33985). United States Department of Agriculture, Economic Research Service.

Chan, H. Y., Ho, R. C.-M., Mahendran, R., Ng, K. S., Tam, W. W.-S., Rawtaer, I., … Kua, E. H. (2017). Effects of horticultural therapy on elderly' health: protocol of a randomized controlled trial. *BMC Geriatrics*, 17(1). doi:10.1186/s12877-017-0588-z.

Cipriani, J., Georgia, J., McChesney, M., Swanson, J., Zigon, J., & Stabler, M. (2018). Uncovering the Value and Meaning of a Horticulture Therapy Program for Clients at a Long-Term Adult Inpatient Psychiatric Facility. *Occupational Therapy in Mental Health*, 1–16. doi:10.1080/0164212x.2017.1416323.

Contò, F., Fiore, M., & Dicecca, R. (2015). Ethics approach in food choices along the agri-food supply chain: a survey in Apulia region. *Know Your Food*, 394–399. doi:10.3920/978-90-8686-813-1_59.

Contò, F., Fiore, M., Lopez, G. A., & di Matteo, A. (2013). Building a Multifunctionality Agricultural House and database: indicators for social/health farms, 1–16. Available online: http://agrimba2013.me/files/sessions/session11/baum.pdf (accessed on 30 December 2017).

Darnhofer, I., Lindenthal, T., Bartel-Kratochvil, R., & Zollitsch, W. (2010). Conventionalisation of organic farming practices: from structural criteria towards an assessment based on organic principles. A review. *Agronomy for Sustainable Development*, 30(1), 67–81. doi:10.1051/agro/2009011.

De Boer, B., Hamers, J. P. H., Zwakhalen, S. M. G., Tan, F. E. S., & Verbeek, H. (2017). Quality of care and quality of life of people with dementia living at green care farms: A cross-sectional study. *BMC Geriatrics*, 17(1) doi:10.1186/s12877-017-0550-0

De Krom, M. P. M. M., & Dessein, J. (2013). Multifunctionality and care farming: Contested discourses and practices in Flanders. *NJAS - Wageningen Journal of Life Sciences*, 64-65, 17–24. doi:10.1016/j.njas.2012.09.002.

Dessein, J., & Bock, B.B. (2010). *The Economics of Green Care in Agriculture*. COST Action 866, Green Care in Agriculture. Loughborough University Press, Loughborough.

Dixon-Woods, M., Agarwal, S., Young, B., Jones, D., & Sutton, A. (2004). Integrative approaches to qualitative and quantitative evidence. *London: Health Development Agency*, *181*. Available online: http://www.cwhn.ca/en/node/24702 (accessed on 30 December 2017).

Elings, M. (2012). Effects of care farms: Scientific research on the benefits of care farms for clients. Retrieved from http://www.carefarminguk.org/sites/carefarminguk.org/files/Effects_of_care_farms_Elings.pdf (accessed on 30 December 2017).

Elings, M., & HASSINK, J. (2006). Farming for Health in The Netherlands. *Farming For Health*, 163–179. doi:10.1007/1-4020-4541-7_13.

Etheredge, C. L., Waliczek, T. M., & Zajicek, J. M. (2016). The Influence of Gardening Activities on Self-reported Health Problems, Allergies, and Body Mass Index. *HortTechnology*, 26(6), 776–782. doi:10.21273/horttech03546-16.

FAO. (2015). *The State of Food and Agriculture 2015. Social protection and agriculture: breaking the cycle of rural poverty*. ISBN 978-92-5-108861-6. FAO, 2015

Ferrini, F. (2003). Horticultural therapy and its effect on people's health. Advances in Horticultural Science, 17(2), 77-87. Retrieved from http://www.jstor.org/stable/42882222. (accessed on 28 December 2017).

Figueiredo, E., & Raschi, A. (2011). «Un'immensa campagna avvolta dal verde»-Reinventing rural areas in Italy through tourism promotional images. *European Countryside*, 3(1), 1-20. doi:10.2478/v10091-011-0001-4

Fraser, C. E., Smith, K. B., Judd, F., Humphreys, J. S., Fragar, L. J., & Henderson, A. (2005). Farming and Mental Health Problems and Mental Illness. *International Journal of Social Psychiatry*, 51(4), 340–349. doi:10.1177/0020764005060844.

Fritze, J. G., Blashki, G. A., Burke, S., & Wiseman, J. (2008). Hope, despair and transformation: climate change and the promotion of mental health and wellbeing. International *Journal of Mental Health Systems*, 2(1), 13. doi:10.1186/1752-4458-2-13.

Fumagalli, N., Senes, G., Betti, G., Bottani, F., & Porta, S. (2017). Defining a therapeutic gardening activities protocol for elderly people living at nursery homes. *Acta Horticulturae*, (1189), 333–338. doi:10.17660/actahortic.2017.1189.64.

García-Llorente, M., Rossignoli, C., Di Iacovo, F., & Moruzzo, R. (2016). Social Farming in the Promotion of Social-Ecological Sustainability in Rural and Periurban Areas. *Sustainability*, 8(12), 1238. doi:10.3390/su8121238.

Gómez-Limón, J. A., & Sanchez-Fernandez, G. (2010). Empirical evaluation of agricultural sustainability using composite indicators. *Ecological Economics*, 69(5), 1062–1075. doi:10.1016/j.ecolecon.2009.11.027

Gonzalez, M. T., Hartig, T., Patil, G. G., Martinsen, E. W., & Kirkevold, M. (2011). A prospective study of existential issues in therapeutic horticulture for clinical depression. *Issues in Mental Health Nursing*, 32(1), 73–81. doi:10.3109/01612840.2010.528168

Gorman, R., & Cacciatore, J. (2017). Cultivating our humanity: A systematic review of care farming & traumatic grief. *Health and Place*, 47, 12-21. doi:10.1016/j.healthplace.2017.06.006

Hart, R. A. (2013). Children's participation: The theory and practice of involving young citizens in community development and environmental care. *Routledge*.

Hassink, J. (2013). The development and diversity of green care across Europe. Green care: For human therapy, social innovation, rural economy, and education (pp. 277-287)

Hassink, J., Agricola, H., & Thissen, J. (2016). Participation rate of farmers in different multifunctional activities in the Netherlands. *Outlook on Agriculture*, 45(3), 192-198. doi:10.1177/0030727016665427

Hassink, J., De Bruin, S., Berget, B., & Elings, M. (2017). Exploring the Role of Farm Animals in Providing Care at Care Farms. Animals, 7(12), 45. doi:10.3390/ani7060045.

Hassink, J., Grin, J., & Hulsink, W. (2013). Multifunctional Agriculture Meets Health Care: Applying the Multi-Level Transition Sciences Perspective to Care Farming in the Netherlands. *SociologiaRuralis*, 53(2), 223-245. doi:10.1111/j.1467-9523.2012.00579.x.

Hassink, J., Grin, J., & Hulsink, W. (2015). New practices of farm-based community-oriented social care services in the Netherlands. *Journal of Social Service Research*, 41(1), 49-63. doi:10.1080/01488376.2014.937889

Hassink, J., Grin, J., & Hulsink, W. (2016). Identity formation and strategy development in overlapping institutional fields: Different entry & alignment strategies of regional organizations of care farms into the healthcare domain. *Journal of Organizational Change Management*, 29(6), 973-993. https://doi.org/10.1108/JOCM-07-2015-0122

Hassink, J., Grin, J., & Hulsink, W. (2018). Enriching the multi-level perspective by better understanding agency and challenges associated with interactions across system boundaries. the case of care farming in the Netherlands: Multifunctional agriculture meets health care. *Journal of Rural Studies*, 57, 186-196. doi:10.1016/j.jrurstud.2017.12.018

Hassink, J., Hulsink, W., & Grin, J. (2012). Care Farms in the Netherlands: An Underexplored Example of Multifunctional Agriculture—Toward an Empirically Grounded, Organization-Theory-Based Typology. *Rural Sociology*, 77(4), 569-600. doi:10.1111/j.1549-0831.2012.00089.x.

Hassink, J., Hulsink, W., & Grin, J. (2014). Farming with care: The evolution of care farming in the netherlands. *NJAS - Wageningen Journal of Life Sciences*, 68, 1-11. doi:10.1016/j.njas.2013.11.001

Hassink, J., Hulsink, W., & Grin, J. (2016). Entrepreneurship in agriculture and healthcare: Different entry strategies of care farmers. *Journal of Rural Studies*, 43, 27-39. doi:10.1016/j.jrurstud.2015.11.013

Haubenhofer, D. K., Elings, M., Hassink, J., & Hine, R. E. (2010). The Development of Green Care in Western European Countries. *EXPLORE: The Journal of Science and Healing*, 6(2), 106–111. doi:10.1016/j.explore.2009.12.002.

Hemingway, A., Ellis-Hill, C., & Norton, E. (2016). What does care farming provide for clients? The views of care farm staff. *NJAS - Wageningen Journal of Life Sciences*, 79, 23–29. doi:10.1016/j.njas.2016.09.001

Hine, R. (2008). Care farming: Bringing together agriculture and health. *Ecos*, 29(2), 42-51.

Hine, R., Peacock, J., & Pretty, J. (2008). Care farming in the UK: contexts, benefits and links with therapeutic communities. *The rapeutic communities*, 29(3), 245-260.

Im, E.-A., Park, S.-A., & Son, K.-C. (2018). Developing evaluation scales for horticultural therapy. *Complementary Therapies in Medicine*, 37, 29–36. doi:10.1016/j.ctim.2018.01.008.

Kam, M. C. Y., & Siu, A. M. H. (2010). Evaluation of a horticultural activity programme for persons with psychiatric illness. *Hong Kong Journal of Occupational Therapy*, 20(2), 80-86. doi:10.1016/S1569-1861(11)70007-9

Kelley, R. J., Waliczek, T. M., & Le Duc, F. A. (2017). The effects of greenhouse activities on psychological stress, depression, and anxiety among university students who served in the U.S. armed forces. *HortScience*, 52(12), 1834-1839. doi:10.21273/HORTSCI12372-17

Leck, C., Evans, N., & Upton, D. (2014). Agriculture - Who cares? An investigation of "care farming" in the UK. *Journal of Rural Studies*, 34, 313–325. doi:10.1016/j.jrurstud.2014.01.012

Lee, Y.-H., Ro, M.-R., & Lee, Y.-S. (2004). Effects of horticultural activities on anxiety reduction of female high school students. *Acta Horticulturae*, (639), 249–251. doi:10.17660/actahortic.2004.639.32.

Lehmann, L. P., Detweiler, J. G., & Detweiler, M. B. (2018). Veterans in substance abuse treatment program self-initiate box gardening as a stress reducing therapeutic modality. *Complementary Therapies in Medicine*, 36, 50-53. doi:10.1016/j.ctim.2017.10.013

Masel, E. K., Trinczek, H., Adamidis, F., Schur, S., Unseld, M., Kitta, A., … Watzke, H. H. (2017). Vitamin "G"arden: a qualitative study exploring perception/s of horticultural therapy on a palliative care ward. *Supportive Care in Cancer*, 26(6), 1799–1805. doi:10.1007/s00520-017-3978-z.

Moher, D., Liberati, A., Tetzlaff, J., Altman, D.G., Group, T.P. (2009). Preferred reporting items for systematic reviews and meta-analyses: the PRISMA statement (reprinted from annals of internal medicine). *Phys. Ther* 89, 873e880. doi:10.1371/journal.pmed.1000097

Mueller, C., & Mueller, B. (2010). The Evolution of Agriculture and Land Reform in Brazil, 1960–2006. *Economic Development in Latin America*, 133–162. doi:10.1057/9780230297388_10.

Mulder, M. (2006). EU-level competence development projects in agri-food-environment. *Journal of European Industrial Training*, 30(2), 80–99. doi:10.1108/03090590610651230.

Niggli, U., Slabe, A., Schmid, O., Halberg, N., & Schlüter, M. (2008). Vision for an Organic Food and Farming Research Agenda 2025. *Organic Knowledge for the Future*.

October, J. R. V., De Villiers, A., & Dolley, L. (2013). The design of a horticultural therapy model and a practical business plan for a horticulturist interacting with a healthcare worker. *Acta Horticulturae*, (1007), 503–511. doi:10.17660/actahortic.2013.1007.58.

Oh, Y.-A., Park, S.-A., & Ahn, B.-E. (2018). Assessment of the psychopathological effects of a horticultural therapy program in patients with schizophrenia. *Complementary Therapies in Medicine*, 36, 54–58. doi:10.1016/j.ctim.2017.11.019.

Pedersen, I., Ihlebæk, C., & Kirkevold, M. (2012). Important elements in farm animal-assisted interventions for persons with clinical depression: a qualitative interview study. *Disability and Rehabilitation, 34*(18), 1526–1534. doi:10.3109/09638288.2011.650309.

Pedersen, I., Patil, G., Berget, B., Ihlebæk, C., & Gonzalez, M. T. (2016). Mental health rehabilitation in a care farm context: A descriptive review of Norwegian intervention studies. *Work*, 53(1), 31–43. doi:10.3233/WOR-152213.

Relf, P. (2006). Theoretical models for research and program development in agriculture and health care: avoiding random acts of research. *Farming for health*, 1-20. doi:10.1007/1-4020-4541-7_1.

Rossignoli, C. M., Giani, A., Di Iacovo, F., Moruzzo, R., & Scarpellini, P. (2017). Enhancing participatory evaluation in a humanitarian aid project. *Evaluation, 23* (2), 134-151. doi:10.1177/1356389017700207.

Rotheram, S., McGarrol, S., & Watkins, F. (2017). Care farms as a space of wellbeing for people with a learning disability in the United Kingdom. *Health and Place*, 48(October), 123–131. doi:10.1016/j.healthplace.2017.10.001.

Sayadi, S., González-Roa, M. C., & Calatrava-Requena, J. (2009). Public preferences for landscape features: The case of agricultural landscape in mountainous Mediterranean areas. *Land Use Policy, 26*(2), 334–344. doi:10.1016/j.landusepol.2008.04.003.

Sempik, J., Hine, R., & Wilcox, D. (Eds) (2010) *Green Care: A conceptual framework, COST Action 866, green care in agriculture*. Loughborough: Centre for Child and Family Research, Loughborough University

Soga, M., Gaston, K. J., & Yamaura, Y. (2017). Gardening is beneficial for health: A meta-analysis. *Preventive Medicine Reports*, 5, 92-99. doi:10.1016/j.pmedr.2016.11.007.

Steigen, A. M., Kogstad, R., & Hummelvoll, J. K. (2016). Grønn omsorg i de nordiske landene: en integrativ litteraturgjennomgang. *European Journal of Social Work, 19*(5), 692–715. doi:10.1080/13691457.2015.1082983.

Thompson Coon, J., Boddy, K., Stein, K., Whear, R., Barton, J., & Depledge, M. H. (2011). Does Participating in Physical Activity in Outdoor Natural Environments Have a Greater Effect on Physical and Mental Wellbeing than Physical Activity Indoors? A Systematic Review. *Environmental Science & Technology, 45*(5), 1761–1772. doi:10.1021/es102947t.

Torske, M. O., Bjørngaard, J. H., Hilt, B., Glasscock, D., & Krokstad, S. (2016). Farmers' mental health: A longitudinal sibling comparison - the HUNT study, norway. *Scandinavian Journal of Work, Environment and Health, 42*(6), 547-556. doi:10.5271/sjweh.3595.

Tranfield, D., Denyer, D., & Smart, P. (2003). Towards a Methodology for Developing Evidence-Informed Management Knowledge by Means of Systematic Review. *British Journal of Management, 14*(3), 207–222. doi:10.1111/1467-8551.00375.

Weltin, A. (2013). A community garden. *American Journal of Nursing*, 113(11), 59-62. doi:10.1097/01.NAJ.0000437117.73553.7e.

Yin RK. (2009) Case study research. Design and methods. *Thousand Oaks: SAGE Publications*.

Zasada, I. (2011). Multifunctional peri-urban agriculture—A review of societal demands and the provision of goods and services by farming. *Land Use Policy, 28*(4), 639–648. doi:10.1016/j.landusepol.2011.01.008.