

Student satisfaction with the Service-Learning methodology: an added value in the training of the nursing degree

Satisfacción de los alumnos con la metodología de Aprendizaje-servicio: un valor añadido en la formación del título de enfermería

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Abstract

Objective: To evaluate the effect on the satisfaction of nursing students and the participants of Service-Learning methodology in the development of Health Education workshops.

Materials and methods: Service-Learning project was designed in four stages: 1) students training in knowledge about Community Nursing and Health Education; 2) development of healthy workshops for its implementation in associations; 3) implementation of the workshops; 4) reflection on Service-Learning impact. An ad hoc questionnaire was developed to assess students' satisfaction. It was also evaluated the workshops' participant's satisfaction.

Results: students reported having a very high level of satisfaction by increasing their scores after improving Service-Learning methodology in the subject. In addition, participants who received health promotion workshops developed by nursing students reported a positive impact on their health.

Conclusion: development of Service-Learning methodology associated with health education implies high level of satisfaction in nursing students and a social impact for the community.

Keywords: Health Promotion; Nursing Education; active learning; Health Education; community health education.

Resumen

Objetivo: Evaluar la satisfacción de los estudiantes de enfermería y los participantes, con la metodología Aprendizaje Servicio en el desarrollo de talleres de Educación para la Salud.

Materiales y Método: El proyecto de Aprendizaje-Servicio se diseñó en cuatro etapas: 1) Formación de estudiantes en conocimientos sobre Enfermería Comunitaria y Educación para la Salud; 2) Desarrollo de talleres saludables para su implementación en asociaciones; 3) Implementación de los talleres; 4) Reflexión sobre el impacto del Aprendizaje-Servicio. Se desarrolló un cuestionario ad hoc para evaluar la satisfacción de los estudiantes. También se evaluó la satisfacción de los participantes de los talleres.

Resultados: Los estudiantes informaron tener un nivel de satisfacción muy alto, al aumentar sus puntajes luego de mejorar la metodología de Aprendizaje-Servicio en la asignatura. Además, los participantes que recibieron talleres de promoción de la salud, desarrollados por estudiantes de enfermería, reportaron un impacto positivo en su salud.

Conclusión: El desarrollo de la metodología de Aprendizaje-Servicio asociado a la educación en salud, implica un alto nivel de satisfacción en los estudiantes de enfermería y un impacto social para la comunidad.

Palabras clave: Promoción de la salud; Educación en enfermería; Servicio de aprendizaje; Salud de la comunidad.

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Introduction

Community engagement pedagogies that are commonly termed ‘Service-Learning’, combine learning goals and community service with the motivation of achieving educational outcomes for students as well as benefits for communities¹.

Service-Learning is an experiential approach to learning based on the principle of reciprocal learning². The approach has its roots in the educational philosophies of John Dewey’s writings on the nature of understanding and the benefits of participation, his method known as “learning by doing” is based on learning through experience³. The central idea of Dewey’s theory involved a close contact of education with personal experience. Supposed an adaptation of the scientific method to the learning process, through troubleshooting method⁴.

Service-Learning allows the completion of the university training that should allow the student to face a dynamic work market characterized by quick innovative and specialized responses. It should also contribute to encourage the internalization of the community service through the development of a series of competencies, abilities and skills according to the academic profiles^{2,3}. Service-Learning enhances the critical thinking and cultural sensitivity of nursing students while helping to solidify nursing skills and values⁵.

A quality University training should not be limited to the academic area but should also encourage and develop moral and personal development of the students. There are different scenarios where the integration of ethical training and teaching in values of the students with the curricular learning of the subjects can connect, being one of them the Service-Learning. Service-Learning methodology allows provide students with service opportunities to help foster development of personal characteristics, such as empathy, personal values, beliefs, self-esteem, self-confidence, social responsibility, and caring for others⁶. Considering a new perspective of university teaching, it is deduced that the methods of teaching must experience a renewal and this is where it comes from in terms of Service-Learning⁷. Closing on the end of the second decade of the of the 21st century the educational methodology of Service-Learning approach is taking on a major role in different universities, both in Europe in general and in Spain in particular.

Therefore, the university becomes a space of construction of values where the students can take the maximum advantage of the resources that are offered and put them into the service of the community^{5,8}. Some authors⁹ offer ten indicators to consider and evaluate the quality of the University experience in Service-Learning stating: the basic dimensions (social

needs, service, social sense and learning), the pedagogical dimensions (participation, teamwork, reflection, recognition and evaluation) and the organizational dimensions (partnership and consolidation in centers and entities).

Basically, Service-Learning unites community service with the academic learning. Therefore, these two aspects, the service and the studies are related between them: the studentship follows the university academic year in a field that is closely linked with his service to the community⁸. Nurse educators have the responsibility to create opportunities for nursing students to develop their critical thinking skills and provide meaningful service to communities; service-learning is one approach for creating such opportunities¹⁰. Engaging students in Service-Learning experiences helps them develop their awareness of civic responsibility^{11,12}.

In relation the theoretical bases upon which to withhold Service-learning project a recent study¹³ concluded with concern that in very few Service-Learning studies the theoretical frameworks are explained. In this same study, the different theoretical frameworks where Service-Learning is thoroughly analyzed allowed the discovery of three qualitatively different learning processes with practical implications. In the first place, investigations based on experienced Service-Learning show that learning processes are based on the connection between practice and knowledge through reflection. Secondly, investigations that have Service-Learning as a transformative learning reference discover the importance of experiencing alterity. The creation of affective relations with others is necessary so as to achieve the identity expansion and change¹⁴. In the third and last place, the objective of a Service-Learning project will not base itself in the individual learning process of the students, but in the mutual transformation of all the participating agents through the dialogic change and learning processes¹⁵. These characteristics are obtained in the same moment where the students are placed in the center of the learning and educational process¹⁶. On the other side, the fact of working in real contexts developing the knowledge that have been acquired in the subject and learning to face the difficulties of the day to day activities, introduces the experience of the process¹⁷.

Currently, Service-Learning constitutes one of the key methodological ways in the educational field, mainly due to the great fit with the European Higher Education Area (EHEA) recommendations. This happens because Service-Learning combines the learning and community service processes favoring the student’s capacities of taking the solidary learnt contents into practice^{18,19}. The integration of both elements, community service and significant learning in a single well-articulated coherent project increases the formative capacity of both elements and understands the human development and the creation of links amongst the community members²⁰.

Universities are called to fulfill a social role as educational institutions and to provide civic services through the interconnection with the civil society and the public, which is achieved by the introduction of Service-Learning as a pedagogical methodology¹⁸.

Within the specific competencies of the Degree in Nursing included in the EHEA White Paper is Health Education. This is considered one of the main tools available for health professionals to carry out the tasks of health promotion and disease prevention. According to the World Health Organization (WHO), the Service-Learning addresses not only the transmission of information, but also the promotion of motivation, personal skills and self-esteem necessary to take measures to improve health²¹.

Health promoting nursing practice is seen as the way forward for the nursing profession. The integration of interpersonal skills and health promotion within nursing curricula is crucial in enabling the transfer of theoretical concepts into practice. Health promotion in nursing education have important influence on students' attitudes and thereby on the quantity and quality of future health promotion practice²².

Within this framework, there is a teaching innovation project in the subject of Public Health and Community Nursing taught to second grade students in Nursing of the 2017-2018 academic year at the Cardenal Herrera-CEU University. Through this project, the Service-Learning was effectively linked to the pedagogical methodology of the Service-Learning that aims to promote student learning through its active participation in experiences associated with community service¹⁷, specifically Health promotion activities. The results of this first study, which we will refer to as Project 1, were published and included high satisfaction of the students who participated, as well as the identification of facilities and barriers during the process²³. This study aims to address the second part of Project, which we will name as Project 2. It compares the data obtained in Project 1 made during the 2017-2018 academic year and that are already published, with the data obtained in the Project 2 a year later, with the students of the 2018-2019 course. These students had not previously participated in subjects that included the Service-Learning methodology. In addition, they had not performed clinical practices in Primary Care centers. On the other hand, students who attended the subject for the second or third time had the exemption of continuous evaluation so they did not participate in the project.

The objectives set out in this work were the following:

1. To evaluate the effect of Service-Learning methodology on the satisfaction of nursing students in the development of Health Education workshops.

2. To evaluate the effect of Service-Learning methodology on the participants who received the health promotion workshops.

Materials and Methods

This cross-sectional and descriptive study included 88 nursing students who attended to the compulsory subject of "Public Health and Community Nursing I" during the 2018-2019 academic year.

The health promotion associated with the pedagogical methodology of Service-Learning encourages student learning through their active participation in experiences associated with community service. The subject of Service-Learning program is aimed at promoting in the students of the Nursing degree the general competences related to the application of knowledge in practice, basic general knowledge of the study area, development of teamwork skills, capacity building of communication with non-experts, design and project management, ethical commitment and concern for quality.

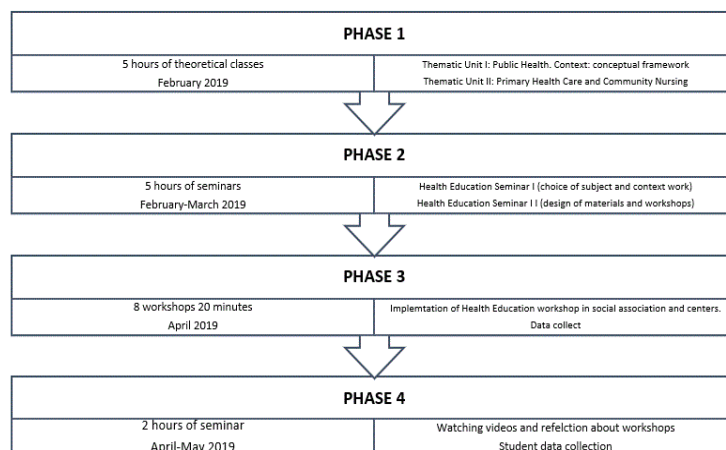
The experience of Project 1, implemented during the 2017-2018 academic year, meant the improvement of the use of the Service-Learning methodology in Project 2 in which group reflection activities have been included, as well as the evaluation of the effects of this experience in the community.

In order to achieve the planned objectives and competencies, Project 2 was carried out in different phases, which were restructured after the analysis of the results of the previous study (Project 1). These phases were part, initially, of the approach to the theoretical contents of the subject related to health promotion and education. And on the other hand, contact was made with associations and centers to agree on the chosen Health promotion issues. At the same time, the students were designing the health promotion workshops that were later taught in the associations and centers previously contacted. Finally, students conducted reflection groups on the approach of the health promotion through the Service-Learning and the effects on users were analyzed (Figure 1).

First Phase: the students received theoretical content about the promotion of health throughout the different master classes in the Public Health and Community Nursing course. These contents were related to the importance of Service-Learning and its methodology. Specifically, the topics discussed were: Health and Public Health: concept and evolution; Family, Community and Public Health Nursing; Community Nursing assistance organization: community activities, procedures and more frequent techniques; and Health Education.

Second Phase: after previous experience in Project 1, contacts with some associations were maintained and the identification of some new ones and contact with them was established.

Figure 1. Schedule of activities in the different phases of Project 2. Valencia, Spain, 2019.



Source: Self-made

The students were divided into groups of between 5 and 10 members. In this phase the seminars of the subject were carried out. Specifically, the students had two seminars of 2 and a half hours each. They worked on the one hand, the needs in health promotion of the users with those who had previously received them by their responsible of the associations and centers. On the other, they carried out the design of the health promotion workshops, as well as the preparation of the necessary materials to replicate them.

Third Phase: the students carried out the implementation of the health promotion activity in the agreed associations. See Table 1 describing the associations, health, educational and social centers, and workshops carried out. Students were recorded after their written consent was collected. The associations also granted this request. On the other hand, data was collected from the users who participated in the sessions through a questionnaire. Currently, the existence of validated scales that assess people's satisfaction with Health promotion programs in which they have been able to participate is scarce. However, a validated questionnaire was used in the "Pacient Actiu" program (based on the methodology of "Expert Patient" of Stanford University) of the Department of Universal Health and Public Health of the Valencian Community (2019). This scale measures the perception of users on the usefulness of Health promotion workshops on different items, as well as their satisfaction. Users answer questions based on a Likert scale from 1 to 5 where 1 corresponds to nothing useful or satisfied or recommended or agreed, and 5 is very useful or satisfied or recommended or agreed.

Fourth Phase: the students attended a final seminar in which the recorded videos were analyzed and reflected on the health promotion process, as well as the methodology used and its contribution to this project. In this phase, data on student satisfaction was collected through an ad hoc questionnaire. This

questionnaire was used in the previous project, which makes it possible to compare the data resulting from both projects. In addition, data were collected on the students' reflection and they were given the opportunity to anonymously provide their written reflections with were analyzed as qualitative data.

All quantitative data collected through the questionnaire was analyzed using the SPSS®-v2015 software package by the researchers. Subsequently, an error correction was made with the second review of the data. Descriptive statistics indices (mean, median, maximum and minimum value, and standard deviation) were calculated. For the inference analysis, given that the quantitative variables did not meet the normality premise, a difference of medians was made using the Mann-Whitney U test. The analyzes were made considering p value less than 0.05 statistically significant.

The qualitative results were analyzed in order to identify positive and negative aspects of the Service-Learning implementation experience in this subject. Its usefulness involves the identification of barriers that must be overcome in the continuity of this methodology, as well as the reinforcement of those highlighted.

Finally, this research project was approved by the Ethics Committee for Biomedical Research of the (Blinded for reviewers). The authorization number for the implementation of the study was IEC19 / 066.

Results

Nursing Students Results

Out of the 88 students enrolled, 71 completed the activity assessment questionnaire, with 80.68% participation. Of the 17 cases lost, 7 were second-year students (who did

Table 1. Description of the characteristics of the Service-Learning workshops taught, Valencia, Spain, 2019.

Associations and centers	Thematic of the Service-Learning workshops	Session length	Number of students	Number of beneficiaries	Materials
Association “Amas de casa Tyrus de Alfara”	Promotion of healthy nutrition in grandchildren.	20 min	5	3	Brochures in the form of triptychs Projector and computer. Healthy Brownie Mannequin torso with breasts Dummy of the pelvis Water bottles for weight simulation.
	Breast cancer prevention	20 min	5		
	Strengthening of the pelvic floor.	20 min	5		
	Promotion of exercise at home.	20 min	5		
Child reintegration center “Manuel Badiá - Moncada”	Effects of drugs on the brain.	20 min	5	15	Brochures in the form of triptychs Projector and computer. Brain lobes mannequin Memory games Material for healing wounds
	Tabaquism prevention.	20 min	5		
	Care of tattoos and piercings.	20 min	5		
	Blood donation and bone marrow donations.	20 min	5		
Day care center “Elaia de Alfara”	Prevention of falls	20 min	5	14	Brochures in the form of triptychs Memory games Rubber bands to stretch Cardboard food posters.
	Memory care	20 min	5		
	Promotion of exercise	20 min	5		
	Healthy nutrition	20 min	5		
“Ramón y Cajal de Alfara” School	CPR for elementary education	20 min	5	40	Brochures in the form of triptychs CPR Mannequins
	Healthy nutrition for elementary education kids.	20 min	5		
“CEU Cardenal Herrera de Alfara” Universitario	CPR	20 min	6	25	Brochures in the form of triptychs CPR Mannequins Spirometer
	Smoking cessation	20 min	5		

Source: Self-made

not perform this activity since it is part of the continuous evaluation of the subject). The remaining 10 were lost by not participating in the last reflection seminar where the data was collected through the questionnaire.

In the subject, the female student body predominated; the results show that 83% of the sample were women. With respect to the variable average age, it was 20.89 ± 3.073 , being the youngest student of 19 years and the oldest of 39 years.

Overall student satisfaction had an average of 8.51 (SD: 1,104). The item with the best average score (DE 9.38: 1.202) was the one where the students valued their belief that the activities carried out in real environments were more useful than in the classroom. However, the item with the lowest score (7.76 SD: 1.527) was the one related to the time spent preparing the work. The rest of the items obtained values above 8 points out of 10, which was a high satisfaction for the students (table 2).

In relation to the qualitative data analyzed. On the one hand, students referred to positive aspects such as the suitability of the activity. This is reflected in the following comment from a participant: *“Very happy with this workshop, they have provided us with material and the teacher has been very aware.”* They also reflected their satisfaction with the use of this methodology as collected by another participant: *“We should do more activities of this type.”* On the other hand, some participants reflected negative aspects such as the excessive preparation time of the activities as indicated in the following comment: *“That the preparation of the activity does not take up as many teaching hours”*. They also considered the amount of information that students had about the users of the centers to be improved, as reflected in the following comment: *“We have needed more information about the group to which we were going to give the session.”* Finally, a participant reflected on the improvement of the activity, proposing that it was the users of the centers who attended the university.

Table 2. Results of the studentship satisfaction questionnaire, Valencia, Spain, 2019.

Questionnaire Questions		N*	Min [†]	Max [‡]	Average	SD [§]
Item 1	I consider that this work has been of great utility for my training.	71	5	10	8,66	1,992
Item 2	I have felt supported and conveniently guided in the development of my work.	70	3	10	8,61	1,627
Item 3	The level required has been adequate.	71	5	10	8,72	1,333
Item 4	I have dedicated enough time to the preparation and presentation of the work.	70	4	10	7,76	1,527
Item 5	I have taken adequate advantage of the working hours in class.	71	4	10	8,37	1,726
Item 6	The activity has helped me to understand what Health Education is.	71	3	10	8,82	1,486
Item 7	This activity has allowed me to improve my abilities when having to talk in public.	71	1	10	8,25	2,123
Item 8	I believe that developing activities in real environments is more useful than developing them in class.	69	5	10	9,38	1,202
Item 9	I believe that the focus of this exercise is very useful for both the personal and the professional sphere.	71	4	10	9,23	1,333
	General satisfaction with the activity.	71	5	10	8,51	1,104

*N = Number of participants; †Min = Minimum points; ‡Max = Maximum points; §SD = Standard Deviation.

Source: Self-made

After obtaining the data from this study (Project 2), these were compared with those of the previous year (Project 1). The average overall satisfaction of the previous course was 8.07 (SD: 1,448)²³. Therefore, the increase in satisfaction of the present study meant an improvement in 0.44 points of the average satisfaction. This increase was proportional in most of the other items with respect to the average and its minimum points.

When analyzing whether the improvement of the Service-Learning methodology has been able to influence in the results showed that the highest level of satisfaction with the activity between the two courses. The statistically difference in the medians of the populations is statistically significant (table 3).

Table 3. U de Mann-Whitney test between general satisfaction and the Service-Learning variable, Valencia, Spain, 2019.

Null Hypothesis	Test	Sig*	Decision
The satisfaction distribution is the same between the Service-Learning categories.	U Mann-Whitney test for independent samples	0,047	Retain the null hypothesis

*Sig = Statistical significance

Source: Self-made

These data demonstrate, on the one hand, that improving the development of the Service-Learning methodology has an effect on student satisfaction. On the other hand, they endorse the development of Project 1 and its analysis, which meant an added value for the identification of improvement needs and the implementation of strategies in Project 2, allowing to optimize both the Service-Learning program and the results measured in student satisfaction.

Participants results

A total of 24 participants answered the questionnaire to assess the satisfaction and usefulness of the health promotion workshops taught by the students. The majority of users were women constituting 72%. Regarding their level of education, 52% had completed secondary education, compared to 36% who had primary education. Only 8% had university studies and the rest did not answer.

In general, the satisfaction results of the users who received the health promotion workshops were high. At least 52% felt that the workshop was very useful for them and 60% would recommend it to others in the same situation. In this sense, 60% indicated high satisfaction with the content and materials delivered. In addition, 88% felt that the materials were well informed and prepared.

Finally, 88% of users said they would participate again in the workshops (see Table 4).

Discussion

The analysis of the degree of satisfaction by the students after the experience of implementing the methodology of Service-Learning in the context of the subject of Public Health and

Community Nursing I, specifically working on the topic of health promotion and disease prevention has presented a high degree of general satisfaction. These results are consistent with those obtained in similar projects developed in higher education contexts²⁴⁻²⁶.

Among all the items, it is item 8: *I think that doing activities in real environments is more useful than doing them in the classroom*, which collects the highest score. This result could be due to the value that students give to the experience of participation and service to society and a deeper understanding of the needs of participants that offers Service-Learning methodology.

On the other hand, item 9: *I consider that the approach of this practice is very useful both in the personal and professional fields*, is the second best valued. This result is in line with the conclusions of other study²⁴ which confirms that Service-Learning allowed the students to achieve their personal development and improved their identity. Some authors^{25,27} stress that this methodology encourages students to take responsibility and learn to make decisions, fosters in them the feeling of utility, of feeling recognized. All this improves their self-esteem, motivates them and favors their growth as people. These data show that the Service-Learning favors the personal development and the integral education of the students, developing all the dimensions of the human being, without reducing or limiting their education to the merely academic aspects. It could be thought that the fact of carrying out a Service-Learning project strengthens experiential learning in a more explicit way which, nevertheless, neglects in some way, the theoretical and content aspects of the subject. But the truth is that what is achieved through experiential learning, is to connect theoretical knowledge with practice through reflection¹³ as Dewey said in his defense of pragmatism³.

Table 4. Results to the questionnaire of the program “Pacient Actiu” to evaluate the user perception of the utility of the Service-Learning workshops and their satisfaction, Valencia, Spain, 2019.

	Frequency (%)	Nothing	Little	Neutral	Some	A lot
<i>Item 1</i>	The workshop has helped me improve my health habits.	(1) 4%	(0)	(3) 12%	(8) 32%	(13) 52%
<i>Item 2</i>	I am satisfied with the help received.	(2) 8%	(2) 8%	(4) 17%	(6) 25%	(8) 33%
<i>Item 3</i>	I would recommend this workshop to other people that are in a similar situation as mine.	(0)	(0)	(2) 8%	(7) 28%	(15) 60%
<i>Item 4</i>	The contents taught are clear, comprehensible and are well structured.	(0)	(0)	(3) 12%	(7) 28%	(15) 60%
<i>Item 5</i>	I find useful the material provided in the workshops.	0	0	(2) 8%	(7) 28%	(15) 60%
<i>Item 6</i>	Materials are well prepared and informed.	(1) 4%	(2) 8%	(0)	(0)	(22) 88%

Source: Self-made

When comparing the results of Project 1 (2017-2018 academic year) in which the average student satisfaction was about half a point less²³, with those obtained in Project 2 (2018-2019 academic year), the data indicates that the implementation of the improvements in the Service-Learning methodology corresponding to the limitations detected in Project 1, has achieved greater student satisfaction. One of the reasons that can justify this result could be the incorporation of a reflection phase at the end of Project 2. As indicated other authors¹³, reflecting on experience is necessary for learning to occur. Dewey's theory describes that learning takes place in cycles of action-reflection until the learner reaches reflection-in-action²⁸.

Finally, we will talk about the social impact that this Service-Learning project has had on the users of the associations, healthcare, educational and social centers that have participated in it. The main result indicates that high percentage of the people who participated in the project would be willing to do it again. On the other hand, most of the participants perceived the health promotion workshop received as somewhat useful or very useful, and 88% would recommend it to others. This information is very positive and one could say that this Service-Learning project has truly achieved the desired social impact. The success of the program could be due to the fact that it has been developed in the towns of Alfara del Patriarca, where the university campus of our university is located. In addition,

direct contact was maintained with the participating entities and their specific needs were assessed beforehand so that all the workshops could respond to their specific demands. These features match what other authors^{6,29,30} identified as a relevant factor to achieve the social impact of a Service-Learning project: intervene on the closest community. He justifies it by saying that students will know better the specific population in which they will develop the service and identify more easily their needs. All this will enhance the creation of links with the community, improve the involvement of students who can witness the results obtained and facilitate the organization of the project.

However, this experience has certain limitations. The main one is the sample size involved in this experience that does not allow extrapolating the results to the general population. The second limitation is to have used an ad hoc questionnaire to assess student satisfaction with the Service-Learning project, since there is no validated instrument that could be used.

Conclusion

We can conclude that the development of activities based on a Service-Learning program for nursing students to acquire skills in health promotion and disease prevention, reports a high degree of satisfaction on the part of students, which increases their motivation when facing the challenge

of learning skills and competencies in the field of Health promotion.

Through this methodology, the student develops teamwork skills and integrates theoretical knowledge by putting them at the service of society in the context of an experience in a real environment, such as Health promotion workshops in associations and health, educational and educational centers.

Finally, the Service-Learning methodology achieves a social impact and brings benefits to the community, since this methodology identifies and responds to the specific needs of the participating groups which perceived as quite useful or very useful. The Health promotion workshop received in over an 80%, and 88% of them would recommend it to others.

Conflict of interests

The authors declare no conflict of interests.

Authors contribution

Conceptualized and designed the study, drafted the initial manuscript and reviewed the manuscript, M.L., C.R., Collected data, carried out analyses and revised the manuscript, L.G.G., Drafted the initial manuscript, A.G., Critically reviewed the manuscript for important intellectual content, A.V. All authors approved the final manuscript as submitted and agree to be accountable for all aspects of the work.

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